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THE

WINTER EVENING

BOOK.

NEW-YORK:

CHARLES S. FRANCIS, 252 BROADWAY.

BOSTON:

JOSEPH H. FRANCIS, 128 WASHINGTON STREET.

1837.

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THE

WINTER EVENING BOOK.

NOVEMBER.

At length it comes among the forest oaks,
With sobbing ebbs, and uproar gathering high;
The scared, hoarse raven on its cradle croaks,
And stockdove flocks in hurried terrors fly,
While the blue hawk hangs o'er them in the sky.—
The hedger hastens from the storm begun,
To seek a shelter that may keep him dry;
And foresters low bent, the wind to shun,
Scarce hear amid the strife the poacher's muttering gun.

The ploughman hears its humming rage begin,
And hies for shelter from his naked toil;
Buttoning his doublet closer to his chin,.
He bends and scampers o'er the elting soil,
While clouds above him in wild fury boil,
And winds drive heavily the beating rain;
He turns his back to catch his breath awhile,
Then ekes his speed and faces it again,
To seek the shepherd's hut beside the rushy plain.

The boy, that scareth from the spiry wheat
The melancholy crow—in hurry weaves,
Beneath an ivied tree, his sheltering seat,
Of rushy flags and sedges tied in sheaves,
Or from the field a shock of stubble thieves.

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There he doth dithering sit, and entertain
His eyes with marking the storm driven leaves;
Oft spying nests where he spring eggs had ta'en,
And wishing in his heart 't was summer time again.
CLARE's *Shepherd's Calender*.

In the "Raven's Almanacke for 1609," by Thomas Decker, there is a quaint description "*Of Autumne, or the fall of the leafe*"—the season which continues into this month—"Autumne, the Barber of the yeare, that sheares bushes, hedges, and trees; the ragged prodigall that consumes al and leaves himself nothing; the arrantest beggar amongst al the foure quarters, and the most diseased, as being alwaies troubled with the falling sicknesse; this murderer of the Spring, this theef to Summer, and bad companion to Winter; seemes to come in according to his old custome, when the Sun sits like Justice with a pair of scales in his hand, weying no more houres to the day then he does to the night, as he did before in his vernall progresse, when he rode on a Ram; but this bald-pated Autumnus wil be seen walking up and down groves, medows, fields, woods, parks and pastures, blasting of fruites, and beating leaves from their trees, when common high-wayes shall be strewed with boughes in mockery of Summer and in triumph of her death; and when the doores of Usurers shall be strewed with greene hearbs, to doe honour to poor Brides that have no dowrie (but their honestie) to their marriage: when the world lookes like olde Chaos, and that Plentie is turned into Penurie, and beautie into uglinesse: when Men ride (the second time) to Bathe—and when unthriftes fly amongst Hen-sparrowes, yet bring home all the feathers they carried out: Then say that Autumne raignes, then

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is the true fall of the leafe, because the world and the yeare turne over a new leafe."

From these amusing conceits we turn for better thoughts to the following instructive passages by Dr. Drake in his "Evenings in Autumn:"—

No period of the year is better entitled to the appellation of The Season of Philosophic Enthusiasm, than the close of Autumn. There is in the aspect of every thing which surrounds us, as the sun is sinking below the horizon, on a fine evening of October (or November), all that can hush the troubled passions to repose, yet all which, at the same time, is calculated to elevate the mind, and awaken the imagination. The gently agitated and refreshing state of the atmosphere, though at intervals broken in upon by the fitful and protracted moaning of the voiceful wind; the deep brown shadows which are gradually enveloping the many colored woods, and diffusing over the extended landscape a solemn and not unpleasing obscurity; the faint and farewell music of the latest warblers, and the waning splendor of the western sky, almost insensibly dispose the intellectual man to serious and sublime associations. It is then we people the retiring scene with more than earthly forms; it is then we love

> to listen to the hollow sighs
> Through the half leafless wood that breathes the gale.
> For at such hours the shadowy phantom pale
> Oft seems to fleet before the Poet's eyes;
> Strange sounds are heard, and mournful melodies
> As of night wanderers who their woes bewail.
>
> *Charlotte Smith.*

It is scarcely possible not to prostrate ourselves with deep humility before the throne of that Almighty being who wields, directs, and limits the career of an element which, if let loose on this firm globe, would winnow it to dust.

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When we behold the birds that wing their way through this immeasurable void, through what vast tracts and undiscovered paths they seek their distant food; with what love and gratitude should we not reflect, that if he in mercy has become their pilot and their guide, how much more will he prove to us a sure and never failing protector.

And when we turn our eyes from earth, its falling leaves and fading aspect, its gathering gloom and treacherous meteors, to that great and glorious vault where burn the steady lamps of heaven, or where, shooting into interminable space, flow streams of inextinguishable lustre, we are almost instinctively reminded, that here our days are numbered, that on this low planet brief is the time the oldest being lives, and that, passing from this transitory state, we are destined to pursue our course in regions of ever-during light, in worlds of never-changing beauty.

CONSTANTINOPLE IN 1831.

FROM THE JOURNAL OF AN OFFICER.

The changes effected both in the dress and manners of the inhabitants of Constantinople, and in the style of the city itself, since I last visited it in 1818, were to me most surprising and unexpected. Certainly the greatest portion of the imposing appearance of the Turks has been lost by the recent reform in their costume, which formerly was rich, elegant, and varied; but under this present Frank or European garb, they have become an ill-dressed, slovenly, nay, even in most cases, a ridiculously mean-looking race. The crimson stuffed cap, surmounted by a blue spread tassel, descends low on

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the eyebrows, and how deeply must its enemies sigh after the proud and fanciful turban! The younger and less respectable Turks who have adopted the new costume, put on short round Jackets with upright collars, buttoned to the chin, and, according to the season, wear very loose calico or woollen Cossac trousers. The older and more respectable classes make use of loose long surtout coats, with stiff strait collars; waistcoats, loose trousers, and tie black shoes, complete the dress; and sometimes a dirty white neckcloth is tied uncomfortably about their throats. To conceal, however, this cruel abolition of a beautiful national dress, a military cloth cloak is worn by the Effendis, which conceals the horrors of their present habiliments. So altered are the gentry of the new costume, that I should say their next step would be to turn Christians. The European dress was never intended for a Mohamedan, or even an Asiatic.

It is astonishing the effect dress has on the habits of the human race. Thus the Turks became more dignified and slothful than by nature they were intended to have been, because they could neither manage on foot the arrangement of their heaps of clothes, nor walk with comfort in their slippers. Since the tails of their coats have been clipped, certainly they move about with more activity. The sword is much more rapid in the work of conversion than the tongue. The Sultan uses the former weapon without any remorse; and it must be confessed, after all, that the Turks are a dastardly people, easily intimidated, submissive, and cringing.

This has become apparent since the destruction of the Janisaries. Military costume is the fashionable dress of the day; whilst all copying from the Sultan, wear their beards of the same length as

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his, and pull their caps equally low over their foreheads. The national color for the army is blue. I never saw a better behaved body of men than the new troops, trained and regimented on the European principle; they are always ready to give assistance to foreigners when required.

The city of Constantinople is much improved by being kept very clean, by the erection of new bazaars, by the embellishment of the old ones, and by the guardianship of a very vigilant police. The streets are now free from all rubbish and offensive objects; no notice is taken of foreigners; and even European females, without the slightest change of costume, may walk through every part unmolested, and almost unobserved.

Last Friday we went to see the Sultan on his weekly visit to a mosque, to hear divine service. It was on the Pera side of the Bosphorus. About five thousand infantry, with a powerful band, were drawn out in one line from the entrance of the place of worship, to receive him. They must have been part of a select corps, since the men were very well dressed, and remarkably good-looking, stout and tall. They handled their arms well, and were steady. We were placed under the veranda of a coffee-house, close to which the Sultan passed. His Majesty was preceded by six led horses, saddled and bridled in the European manner, with richly embroidered shabracks; then came double files of mounted pages, dressed in various colored jackets, and white trousers, officers of the household, aides-de-camp, and other military attendants; and lastly, the favorite Meer Allace, or General of the Guards, Hoosain Pacha. To these succeeded the Sultan, immediately followed by a personal guard of infantry, composed of remarkably fine handsome

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young men. He wore the scarlet military cap, embroidered round the sides, and surmounted by a rich gold tassel, the long bullion of which hung like a fringe over its crown. A cloak of sky blue cloth, with strait embroidered collar, almost concealed his under dress, a light cloth jacket, buttoned tight up to the chin, his gold-laced white kerseymere trousers, and boots, with spurs. On his left breast shone a most beautiful diamond star. His sabre and belt were European, as also his saddle and bridle. For a moment I could scarcely place faith in my sight, so changed was this haughty monarch "of the sea and earth" from what I had seen him some years back, moving in the full awfulness of Asiatic majesty. The waving plumes of a multitude of shattars, or running footmen, then screened him from the gaze of his subjects; he was borne on by his horse at a movement almost motionless, his eyes were fixed, countenance pale, gloomy, and most melancholy; and now I beheld the same powerful sovereign decked out in a flippant uniform, very similar to that of a light cavalry officer, with florid complexion, active inquisitive gaze, and beard clipped almost to the chin. I must say, Sultan Mahmood seemed to enjoy his emancipation from all the thraldoms of pomp and ceremony. In about half an hour the Sultan returned, and every part of the procession was managed without the slightest noise or confusion. Though, I imagine, the Sultan must have moments of great uneasiness regarding his personal safety, he does not hesitate to move amongst the crowded streets, or apparently shun occasions when attempts might be made on his life.

Persons who, by a long sojourn in Constantinople, have acquired a considerable and more than

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superficial knowledge of Turkish affairs, assert, that the late changes and ameliorations, instead of retarding, will accelerate the downfall of the Ottoman Government. The spirit of the people has been broken, and both national and religious feelings humbled and outraged. It is an arduous undertaking for a monarch endowed even with great wisdom and resolution to reform a nation, particularly a nation professing the Mohammedan faith; yet I should say, that much has apparently been effected in Constantinople; and, judging superficially, we would deem it the capital of a prosperous and vigorous government. The public buildings are undergoing general repair, old edifices are removing to be erected anew, and every where there is a certain stir denoting activity. Yet these signs of improvements are only observable in Constantinople, whilst the provinces are oppressed, misruled, and absolutely defenceless. If the system pursued by the Sultan does not produce the results anticipated by many, even to the regeneration of his people, certainly the body of the nation has been relieved from the insolence and lawless habits of the Janisaries; and those predatory bands of horsemen, the Dehlees and Hytees, no longer pillage and desolate the country. Criminals are now with facility seized and punished, and for years the Turkish empire has not been so tranquil, or so secure for foreigners, travellers, or merchants.—*United Service Journal.*

Controversy.—A man who is fond of disputing, will, in time, have few friends to dispute with.

Earning the best getting.—Give a man work, and he will find money.

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ANTONIO CANOVA.

Antonio Canova, one of the greatest sculptors of modern times, was born on the first of November, 1757, at Passagno, an obscure village situated amid the recesses of the hills of Asobano, where these form the last undulations of the Venetian Alps, as they subside into the plains of Treviso. At three years of age he was deprived of both parents. The father and grandfather of the artist

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followed the occupation of stone cutters. The early years of Canova were passed in study, and the bias of his mind was to sculpture. In his ninth year he executed two small shrines of Carrara marble, which are still extant. He was patronized by the patrician family, Faliero of Venice, by whom, at the age of thirteen, he was placed under Bernardi, a sculptor of considerable eminence. In consequence of the death of his master, he was placed under Bernardi's nephew, with whom he continued about a year, and then commenced business on his own account. The kindness of some monks supplied him with his first workshops, where for four years he labored with the greatest industry. He determined to study from nature, and devoted a portion of his time to anatomy, which he considered as the secret of his art. He received orders for various groups, and his merits and reputation being pretty generally recognised, he turned his attention to the more classic banks of the Tiber, for which he set out at the commencement of his 22d year. Previous to his departure the Venetian senate granted him a pension for three years, amounting to 60*l.* per annum. The work which first established his fame at Rome, was Theseus vanquishing the Minotaur, which was regarded with rapturous enthusiasm. His next undertaking was a monument in honor of Clement the XIV. which occupied him four years, and was opened to public inspection in 1787. Our limits will not permit us even to enumerate his various productions, all of which were of the highest order. The last performance which issued from his hand was a colossal bust of his friend the Count Cicognaua. He expired at Venice, on the 13th October, 1822, at the age of 65,

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The most distinguished funeral honors were paid to his remains, which were deposited in a temple of his own erecting at Passagno, on the 25th of the same month.

TRUST TO YOURSELF.

This is a glorious principle for the industrious and trading classes of the community; and yet the philosophy of it is not perhaps understood so well as it ought to be.

There is hardly any thing more common in the country than to hear men spoken of who originally, or at some period of their lives, were rich, but were ruined by "*security*"—that is, by becoming bound to too great an extent for the engagements of their neighbors. This must arise in a great measure from an imperfect understanding of the question; and it therefore seems necessary that something should be said in explanation of it.

I would be far from desiring to see men shut up their hearts against each other, and each stand, in the panoply of his own resolutions, determined against every friendly appeal whatsoever. It is possible, however, to be not altogether a churl, and yet to take care lest we be tempted into an exertion of benevolence, dangerous to ourselves, while it is of little advantage to our friends.

Notwithstanding the many ties which connect a man with society, he nevertheless bears largely imprinted on his forehead the original doom, that he must chiefly be dependent on his own labor for subsistence. It is found by all men of experience, that, in so far as one trusts to his own exertions solely, he will be apt to flourish; and, in so far as he leans and depends upon others, he will be the

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reverse. Nothing can give so good a *general* assurance of well-doing as the personal activity of the individual, day by day exerted for his own interest. If a man, on the contrary, suddenly finds, in the midst of such a career, a prospect of some patronage which seems likely to enrich him at once, or if he falls into the heritage of some antiquated claims to property or title, which he thinks it necessary to prosecute, it is ten to one that he declines from that moment, and is finally ruined. The only true way to make a happy progress through this world, is to go on in a dogged, persevering pursuit of one good object, neither turning to the right nor to the left, making our business as much as possible our pleasure, and not permitting ourselves to awake from our *dream of activity*—not permitting ourselves to *think that we have been active*—till we suddenly find ourselves at the goal of our wishes, with fortune almost unconsciously within our grasp.

Chambers.

ART OF WRITING.

Mr. Mariner, in the account of his visit to the Tonga Islands, gives an interesting anecdote of a native's astonishment at the art of writing. Mr. Mariner, shortly after the commencement of his captivity among these savages, had, in the hope of thereby obtaining his liberty, written a letter, with a solution of gunpowder, on a piece of paper which he obtained from one of the natives; and he confided it to the care of a chief, with directions that it should be given to the captain of any ship which might appear on the coast. Finow, the king, however, having heard of this transaction, his suspicions were excited, and he immediately sent to the

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chief for the letter, and obtained it. "When it was put into his hands," the narrative proceeds, "he looked at it on all sides; but not being able to make any thing of it, he gave it to Jeremiah Higgins, who was at hand, and ordered him to say what it meant: Mr. Mariner was not present. Higgins took the letter, and translating part of it into the Tonga language, judiciously represented it to be merely a request to any English captain that might arrive to interfere with Finow for the liberty of Mr. Mariner and his countrymen: stating that they had been kindly treated by the natives, but nevertheless wished to return, if possible, to their native country. * * * This mode of communicating sentiments was an inexplicable puzzle to Finow; he took the letter again and examined it, but it afforded him no information. He considered the matter a little within himself; but his thoughts reflected no light upon the subject. At length he sent for Mr. Mariner, and desired him to write down something; the latter asked what he would chose to have written; he replied, put down me; he accordingly wrote '*Fee-now*' (spelling it according to the strict English orthography); the chief then sent for another Englishman who had not been present, and commanding Mr. Mariner to turn his back and look another way, he gave the man the paper, and desired him to read what that was: he accordingly pronounced aloud the name of the king, upon which Finow snatched the paper from his hand, and, with astonishment, looked at it, turned it round, and examined it in all directions: at length he exclaimed, 'this is neither like myself nor any body else! where are my legs? how do you know it to be I?' and then, without stopping for any attempt at an explanation, he im-

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patiently ordered Mr. Mariner to write something else, and thus employed him for three or four hours in putting down the names of different persons, places, and things, and making the other man read them. This afforded extraordinary diversion to Finow, and to all the men and women present, particularly as he now and then whispered a little love anecdote, which was strictly written down, and audibly read by the other, not a little to the confusion of one or other of the ladies present; but it was all taken in good humor, for curiosity and astonishment were the prevailing passions. How their names and circumstances could be communicated, through so mysterious a channel, was altogether past their comprehension. Finow at length thought he had got a notion of it, and explained to those about him it was very possible to put down a mark or sign of something that had been seen, both by the writer and reader, and which should be mutually understood by them; but Mr. Mariner immediately informed him, that he could write down any thing that he had never seen; the king directly whispered to him to put Toogoo Ahoo (the King of Tonga, whom he and Toobo Nuha had assassinated many years before Mr. Mariner's arrival). This was accordingly done, and the other read it; when Finow was yet more astonished, and declared it to be the most wonderful thing he had ever heard of. He then desired him to write 'Tarky' (the chief of the garrison of Bea, whom Mr. Mariner and his companions had not yet seen; this chief was blind in one eye). When 'Tarky' was read, Finow inquired whether he was blind or not; this was putting writing to an unfair test! and Mr. Mariner told him that he had only written down the sign standing for the sound of his name,

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and not for the description of his person. He was ordered, in a whisper, to write, then '*Tarky, blind in his left eye,*' which was done, and read by the other man, to the increased astonishment of every body. Mr. Mariner then told him, that in several parts of the world messages were sent to great distances through the same medium, and, being folded and fastened up, the bearer could know nothing of the contents; and that the histories of whole nations were thus handed down to posterity, without spoiling by being kept (as he chose to express himself). Finow acknowledged this to be a most noble invention, but added that it would not do at all for the Tonga Islands; that there would be nothing but disturbances and conspiracies, and he should not be sure of his life, perhaps, another month."

Business.—Business, says a celebrated writer, is the salt of life, which not only gives a grateful smack to it, but dries up those crudities that would offend, preserves from putrifaction, and drives off all those blowing flies that would corrupt it. Let a man be sure to drive his business rather than let it drive him. When a man is but once brought to be driven, he becomes a vassal to his affairs. Reason and right give the quickest despatch. All the entanglements that we meet with arise from the irrationality of ourselves or others. With a wise and honest man a business is soon ended, but with a fool and knave there is no conclusion, and seldom even a beginning.

Reply of Diogenes the Cynic.—Diogenes the Cynic being interrogated what benefit he reaped from his barbarous philosophical researches, and his pursuit of wisdom—"If I reap no other benefit," says he, "this alone is sufficient compensation, that I am prepared to meet with equanimity every sort of fortune."

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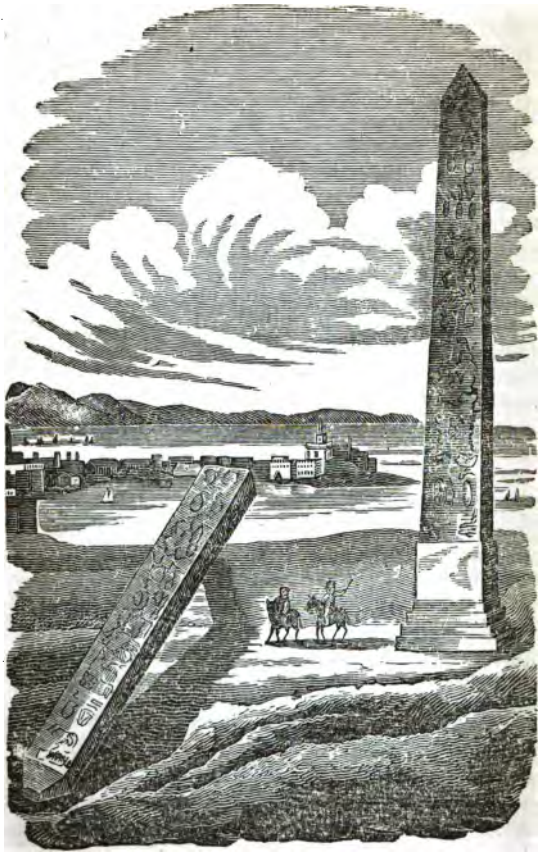

Obelisks with hieroglyphics at Alexandria.

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ART OF WRITING.

The art of writing is of great importance; it conveys our thoughts to others by certain marks or representations: there are several methods by which it was practised in former times, and in later days. One method, used by some Indians and other untaught nations, is a kind of picture writing, or drawing, to represent the things which the writer desires to tell to others. The Rev. T. H. Horne, in a work which he has written about books, copies a drawing of this sort made by some North American Indians, which represents one of their expeditions against their enemies. Similar drawings of the ancient Mexicans have been copied by other authors. Another sort of picture writing, probably an improvement on that just mentioned, was much used by the Egyptians; it is called hieroglyphic writing. The first sort of picture writing only represents things, but this represents ideas or thoughts. For instance, an eye represented God, who sees all things; a sword, a cruel tyrant; an eye and sceptre, a king; a lion represented courage; armies were meant by hands with weapons. There are cards and books to amuse children, with pictures or hieroglyphics, not unlike the sorts of writing I have just mentioned.

An inscription on a temple in Egypt, expressing this moral sentence, "All you, who come into the world and go out of it, know this—that the gods hate impudence;" was represented by an infant, an old man, a hawk, a fish, and a river horse. It is thought by some persons, that, from this way of representing religious and moral truths by pictures of animals, the ancient Egyptians came to worship the animals themselves; as the introducing images, or paintings, into churches, led the papists to wor-

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ship them. Several obelisks, or high pillars, in Egypt, are covered with this sort of writing; see the representation of two famous ones at Alexandria, called Cleopatra's needles, at the beginning of this article; they are a hundred feet in height, upwards of seven feet square at the base. The four sides of both are richly adorned with hieroglyphics, cut an inch deep in the granite stone.

INDIGO.

The real nature of indigo was not generally known in Europe, until a long period after it had been obtained direct from India, the country of its production; and many erroneous notions existed as to its nature at a comparatively recent period. In the letters patent granted to the proprietors of mines in the principality of Halberstadst, not many centuries ago, indigo was classed among the minerals, to obtain which the works were permitted to be erected.

Marco Polo, indeed, who flourished in the thirteenth century, and who is the earliest European traveller into China and India on record, relates that he saw indigo made in the kingdom of Coulan, and describes the process by which it was prepared. "Indigo," says the old Venetian, "of excellent quality and large quantities, is made here (Coulan.) They procure it from an herbaceous plant, which is taken up by the roots and put into tubs of water, where it is suffered to remain till it rots, when they press out the juice. This, upon being exposed to the sun and evaporated, leaves a kind of paste, which is cut into small pieces of the form in which we see it brought to us." This passage of the Italian ought at least to have prevented the Ger-

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mans from considering the product as a mineral, which they were to seek in the bowels of the earth; but illiberal ignorance had thrown discredit on Marco Polo and ranked him among those travellers whose lies were proverbial. At two other places in India, Guzzerat and Kambaia, Marco speaks of indigo as an article of extensive manufacture. Much curious information in regard to the trade in this article at the middle of the fourteenth century is contained in the works of Francesco Balducci Pegolotti. At that time indigo was imported in leather bags and in chests, in the same manner as at present. Although for more than two thousand years its value had been recognised in Asia, still its use was either prohibited or restrained for a considerable period in different European countries, under the erroneous belief that its color was fugitive.

It was not until after the discovery of America that indigo was obtained in any very large quantities in Europe. The plant from which it is prepared was found growing wild in most of the tropical parts of the western hemisphere. Its application was likewise well known. We learn from the authority of more than one traveller, that the Aztecs, the unfortunate aborigines of Mexico, were well aware of its value as a dye, and that it was commonly employed by them in giving a beautiful hue to their cotton fabrics. During the last century the cultivation of indigo has been almost entirely neglected by the Spanish Mexicans, from the preference given in Europe to the indigo of Guatimala, or central America, and the failure of the native cotton manufacture in which it was principally used. Since the Mexicans have shaken off the Spanish yoke their commercial and agricultural prosperity has

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become a subject of more rational interest and attention. Attempts are now therefore being made to revive, among other branches of industry, the cultivation of indigo. A little is now grown on the western coasts, and it has been introduced into the valley of Cuautla. In some parts, which are hot and marshy, it is a natural production of the soil.

The indigo of Guatimala was long prized as the best, and although this plant was cultivated in the West Indies and other parts of America, none ever approached to the excellence of that of Guatimala, which was long rated in commerce as of unrivalled quality. This plant was much cultivated in the French West-India islands, and the government of the parent country took so great interest in its improvement as to appoint scientific men to investigate its preparation and to point out in what manner it was susceptible of improvement. It does not appear, however, that these exertions were attended with any very beneficial results, and although much was suggested, perhaps no real, certainly no very important, improvements were introduced in the mode of preparing indigo. That prepared by the French still ranked lower, though next in quality to the produce of Guatimala.

This plant was for some time cultivated in great abundance in Jamaica, forming one of its principal articles of exportation; but a tax having been laid upon it, the culture of sugar became a more profitable branch of agriculture. *Indigofera* was found growing spontaneously in Carolina in the year 1747, and so abundantly that 200,000 lbs. were shipped to England, and sold at a very good price, though it was not quite so well prepared as the French indigo; its farther cultivation in North America has not, however, been very extensively prosecuted.

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In the year 1787 another source for the supply of indigo was opened by the French, who then began to import cotton and indigo from their settlement at Goree, on the coast of Africa. This dye was pronounced by the English dyers to be almost equal to that of Guatimala, and superior to every kind of West-India indigo.

Indigo from America was for a long period very superior to that obtained from the East; and although this dyeing ingredient was recognised in commerce as coming from the East Indies, it was imported thence in small quantities, and of so indifferent a quality, as not in any way to compete with the western production. Scarcely twenty years ago, this was the relative position of the indigoes from America and Asia. Since then the judicious and spirited exertions of a few enlightened individuals have shown that by careful cultivation and preparation its character might be essentially improved in the British possessions in India. At the present day this article ranks among the most important objects of our commerce with the East Indies, while its quality has been raised far above that received from South America.

The seed is sowed in little furrows about the breadth of the hoe, and two or three inches in depth. These furrows are made a foot apart from each other, and in as straight a line as possible. A bushel of seed is sufficient for five acres of land. Though it may be sown in all seasons, spring is mostly preferred for the purpose. Soon after sowing, continual attention is required to pluck the weeds, which would quickly choke up the plant, and impede its growth. Sufficient moisture causes it to shoot above the surface in three or four days.

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and it is usually fit for gathering at the end of two months. When it begins to flower, it is cut with a

Slaves gathering Indigo.

sickle a few inches above its roots. The ratoons, or subsequent growth from the same plant, ripen in six or eight weeks. Sometimes four crops are obtained in one year from the same roots; but in North America and other parts where the heat of the sun is less fervid, the cultivator obtains but two, or perhaps only one crop. The produce diminishes fast after the second cutting, and therefore it is said to be absolutely necessary to sow the seeds afresh every year, or every two years at farthest.

The coloring matter is obtained from the whole

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plant. There are two modes used for its extraction —it is fermented, or it is scalded. The first method is universally practised in South America and the West Indies; and almost wholly by the English factors in the East.

If dried hastily in the sun it is apt to become brittle. When all moisture is expelled, and the substance is quite solid, it is cut into square cakes. The process is not yet, however, completed. If exported in this state it would speedily become mouldy; a second fermentation is therefore necessary. To produce this the cakes are heaped in a cask and simply suffered to remain there for about three weeks. During this time they undergo a degree of fermentation; they become heated, moisture exudes from the surface, a most disagreeable odor is emitted, and finally the cakes are covered with a fine white meal. They are then taken out and dried in the shade for five or six days, when they are in a fit state to be packed for exportation.

NO CEREMONY.

If you were to search society, you would find nine out of every ten profess their utter dislike of all ceremony. Take them at their own word, they are the most downright, unaffected people in the world; but see them in the practice of life, and they turn out to be as full of airs, and as much offended at any little omission of the punctilious homage due to themselves as may be. It seems as if we were under a constant wish to get back to nature and simplicity, but as constantly checked in every effort to that effect, by the powerful bonds which a state

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of society has imposed. We would all fain be the easy, pleasant, happy children which we think we once were, instead of the cold, artificial, heartless beings which we think we now are. But, in feeling thus, we forget that when we were children sporting with each other, we were perpetually giving and receiving offence, from rudeness of behavior among ourselves—in other words, from the want of a conventional system of respectful manners—and that thus we were often the most unhappy wretches in the world, frequently snarling at each other, sometimes getting sound thrashings from our offended companions, and sometimes giving them, perhaps for very little fault; and, in general, only prevented from being rude and riotous, nay, sometimes, from being rank spoliators and oppressors, by the fear of punishment from a stronger hand.

If the world were only gratified in its general desire of abjuring ceremony *for one day*, by way of experiment, it would soon, I apprehend, find the necessity of returning to a decent degree of affectation. Suppose a respectable gentleman going abroad that morning, full of the idea of doing all kinds of things in an easy way, as he used to do when a boy. He sees an old school-fellow a little way before him on the street, and, thinking it a good joke, runs up and knocks the hat off his head, making it spin far into the highway, and then turns about and laughs in the face of the injured party. The *jokee*, however, has a different idea of the matter from the *joker;* and whereas in school-boy days it would have been settled by a slight pommeling, rendering them rather sulky with each other for a day or two, nothing less will serve in these rational days of adolescence, than a regular interchange of shots at each other, at the distance of twelve or nine paces, as the case may be.

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Suppose two ladies, intimate friends, meeting on the street. One admires the other's bonnet immensely, and, as might have happened long ago in the case of a pretty cap for a doll, she endeavors to snatch it from her friend's head. The other, however, defends her property at the point of the parasol, and the end of the joke is, that the two are taken to the police office. Suppose a dinner party meeting in the afternoon of this unceremonious day, if the day has lasted so long without a return to good breeding. Instead of each gentleman conducting a lady to the dining-room, which is a horrid piece of affectation, the whole male sex goes trooping off, in an easy candid way, leaving the women to come trolloping after. Of course, the respect of the men for the women is not increased by seeing them come in at the door pell-mell like a drove of sheep; and, therefore, there is the less disposition to accommodate them with seats, or to serve them with food. The fair part of the company soon become quite indignant at the men, and attack them with all the virulence of the ancient harpies. A scene ensues which there is no describing. The greatest confusion prevails. There is a squabbling of tongues enough to deafen Babel or Billingsgate. The air is darkened with flying plates and candlesticks. At last, within ten minutes after the ringing of the dinner bell, the ladies are seen pouring out of the house like enraged bedlamites, some with their bonnets and shawls, and more without them, and the want of a little ceremony is found to have

"——broke up this mirth, marred this good meeting,
With most admired disorder."

In every department and contingency of life, the

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same results are experienced, so that before night the human race at large seems as if it were about to revert to the savage state.

Nest of the Tchitrec.

ARCHITECTURE OF BIRDS.

One of the prettiest of the woven bird's nests is figured and described by Vaillant in his splendid work on African birds; though he is doubtful what species of bird was the mechanic. The following is his account of this beautiful nest.

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"It is, I believe," says he, "the nest of the tchitrec; for though I have never captured the bird of this species on the nest, and am not therefore certain of the fact, my good Klaas, a faithful if not a profound observer, assured me that it was. In one of our journeys through a wood of mimosas, in the country of the Caffres, he discovered and brought me this nest, having seen, he said, and particularly observed a male and female tchitrec occupied in constructing it. It is remarkable for its peculiar form, bearing a strong resemblance to a small horn, suspended, with the point downwards, between two branches. Its greatest diameter was two inches and a half, and gradually diminishing towards the base. It would be difficult to explain the principle upon which such a nest had been built, particularly as three-fourths of it appeared to be entirely useless and idly made; for the part which was to contain the eggs, and which was alone indispensable, was not more than three inches from the surface. All the rest of this edifice, which was a tissue closely and laboriously woven of slender threads taken from the bark of certain shrubs, seemed to be totally useless. The interior of the nest was not furnished with any sort of soft material, such as down, wool, or hair, but as the female had not laid her eggs when Klaas brought it to me, it is probable that the nest was not quite finished; a fact indeed proved by the birds being still at work at the time."

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UNION BRIDGE BY-TOWN.

By-Town is situated on the southern bank of the Ottawa, a little below the beautiful falls of the Chaudiere, and opposite the flourishing village of Hull, in Lower Canada. It stands upon a high and bold eminence, surrounding Canal Bay, and occupies both banks of the Canal; that part lying to the east being called the Lower, and that to the west, from a superiority of local elevation, the Upper Town. The streets are laid out with much regularity, and are of a liberal width, that will hereafter contribute to the convenience, salubrity and elegance of the place. The number of houses now built is not far short of one hundred and fifty, most of which are constructed of wood, frequently in a style of neatness and taste, that reflects great credit upon the inhabitants.

On the elevated banks of the bay, the hospital, an extensive stone building, and three stone barracks, stand conspicuous; and nearly on a level with them, and on the eastern side of the bay, is delightfully situated the residence of Colonel By, the commanding royal engineer on that station. From his veranda, (says Bouchette, whose description we have adopted,) the most splendid view is beheld that the magnificent scenery of the Canadas affords. The bold eminence that embosoms Entrance Bay, the broken and wild shores opposite, beyond which are seen a part of the flourishing settlements and the church of Hull, the verdant and picturesque islands between both banks, and occasional canoes, barges, and rafts plying the broad surface of the Grand river, or descending its tu-

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multuous stream, are the immediate objects that command the notice of the beholder.

In remoter perspective the eye dwells upon a succession of varied and beautiful bridges, abutting upon precipitous and craggy rocks, and abrupt islands, between which the waters are urged with wonderful agitation and violence. Beyond them, and above their level, the glittering surface of the river is discovered in its descent through the broad and majestic rapid, Des Chênes, until the waters are precipitated in immense volumes over the verge of the rock, forming the falls of the Great and Little Chaudiere. From the abyss into which they are involved with terrific force, revolving columns of mist perpetually ascend in refulgent whiteness, and as they descend in spray beneath a glowing sunshine, frequently form a partial but bright iris, that seems triumphantly to overarch a portion of the bridge. The landscape of the Union Bridges, although not taken exactly from this enchanting spot, may convey some idea of the scope and splendor of the prospect which we have attempted briefly to describe, and partly secure to it that admiration to which it is so richly entitled.

THE GLACIERS.

No person can contemplate the surface of this earth without being impressed with a deep sense of the beauty and grandeur which in almost every country it exhibits. The sunny valley, the extended

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plain, the lofty ice-crowned mountain, alike manifest the presence of that power which pervades the whole visible creation. Well has the poet expressed this in the following invocation:—

> "Spirit of nature! This is thy fitting temple!
> Where not the lightest leaf
> That quivers to the passing breeze,
> But is instinct with thee!"

With minds thus prepared to be affected by the sublimity of the scenes we must now imagine, let us proceed to examine the origin and nature of those immense masses of ice which are termed glaciers, and which are found on the summits of high mountains. When we ascend from the surface of the earth into the higher regions of the atmosphere, we find that the air becomes rarefied; the sun's rays, which impart warmth, are reflected round us with less intensity, and a sense of coldness is experienced. Saussure, in travelling over the Alps, found that the temperature of the air diminished one degree for every two hundred and eighty-seven feet that he ascended. Dr. Heberden, in journeying over the Azores, found the thermometer fall one degree for every two hundred and forty-five feet. A thermometer, placed on the top of Arthur's Seat, will stand three degrees lower than another kept in a situation on a level with its base. Accordingly, it is found that snow exists in all countries at a certain height above the level of the sea, and this particular height is designated the "snow line." We must now, then, picture to ourselves a lofty chain of mountains — the range of the majestic Alps. When the traveller has ascended one of these mountains, he finds himself surrounded by colossal masses of ice. The snow which falls in these high regions is finer, drier, and more crystalline than that

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which, falling through a denser atmosphere more charged with vapor, reaches the lower region of the mountains. Most truly has the poet, in contemplating the summit of Mont Blanc, said—

"Mont Blanc yet gleams on high: The power is there—
The still and solemn power of many sights.
* * * Winds contend
Silently there, and heap the snow with breath,
Rapid and strong—but silently."

The snow which thus accumulates on the tops of these mountains, agglomerates in a slow and irregular manner, under the form of grains, into considerable masses, which, during the summer, are exposed to continual changes of temperature. The very keen cold of the night renders the surface of the mass so hard, that the footstep of the traveller makes no impression on it. The intense heat of the succeeding day, however, separates anew the snowy grains, and the water so melted, penetrating into the interstices thus produced, enlarges each grain by congealing round it. This operation proceeding for a considerable period, and on a great scale, at length gives rise to so compact a crystallized mass, that the rays of the sun have not power to melt it; instead of which, they produce an expansion of the air within the glacier, which gives rise to sudden and violent rents at the surface, which are often of considerable magnitude. "One day," says Professor Hugi, who explored the glaciers of the Alps, "being on the inferior glacier of the Aar during an intense heat, at three o'clock, P. M. I heard a very peculiar noise. I advanced rapidly from thirty to forty paces from the side where the noise was heard; I felt the mass of the glacier shake by jolts under my feet, and I soon discovered the cause. A fissure was formed in an instant, the aperture was

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elongated from twelve to twenty feet, so that I was unable to follow its formation. Sometimes the operation seemed about to cease, and the mass separated itself very slowly; then, again, the fissure continued to open quickly, and by jolts. Many times I ran forward in time to see the separation taking place under my feet. I followed in this way the formation of the fissure over an extent of almost a quarter of a league, even to the border of the glacier, where it stopped. The fissure opened at first, under the first concussion, about an inch and a half, but afterwards it again contracted, so that its breadth did not attain to more than an inch. The interior of this fissure was rough and unequal; a part of the crystals were broken into two, and others almost untouched formed projections to which there were corresponding hollows in the opposite surface. * * * * During the whole of my stay on the inferior glacier of the Aar, we were awaked every night twice or thrice by the subterranean noises which proceeded from the interior of the glacier. Twice the bed itself, which we had dug in the glacier, and which was lined with slates and moss, was violently shaken by jolts analogous to those which I had observed during the formation of the fissure; but the shaking appeared so deeply seated, that we could not for a moment entertain the idea that any rent or crevice would open at the surface." Here we may for a moment pause, to reflect on the awe-inspiring effect of such a scene. It has been well described by Lord Byron, who has put these words into the lips of the gloomy and desperate Manfred:

——— "Ye toppling crags of ice!
Ye avalanches, whom a breath draws down
In mountains overwhelming, come and crush me!
I hear ye momently, above, beneath,
Crash with a frequent conflict; but ye pass,

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And only fall on things that still would live;
On the young flourishing forest, or the hut
And hamlet of the harmless villager."

In connexion with the rifts thus produced in these glaciers, we may quote the following observations and anecdote by Mr. Bohr, who visited the glaciers on one of the high mountains in the interior of Norway:—"It is not," says he, "without terror that you look down into these fearful abysses, however beautiful their azure-colored walls are. In their cold bottoms the lonely traveller has sometimes found his grave. A few years ago, a peasant crossing over from Justedal to Nordfiord, fell into one of these large clefts, which was concealed by the snow. His only companion, a faithful dog, ran down to Justedal, barking and howling as a signal for help. Nobody, however, comprehended his meaning, till the person who had fallen down was at last missed. Several persons then followed the dog up to the glacier, who stopped at the cleft, and gave such signs as put it beyond all doubt that his master had fallen into it. They threw down a rope, and made loud cries, but in vain; the peasant had met his death in the immeasurable gulf. It was only by compulsion that the dog would leave the cleft."

THE GUILLOTINE.

This instrument of judicial punishment in France derives its name from a Dr. Guillotin, one of the most distinguished physicians in Paris, and a person who embraced with ardor the cause of the revolution, and was selected one of the Deputies to the National Assembly. It is supposed by many that Guillotin was one of the first sufferers by the

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instrument which bears his name; but it seems this was not the case. The following notice of him has been translated from the *Biographe Universelle*, by a writer in a London newspaper:—

"Guillotin conducted himself with moderation in the National Assembly: he directed his attention there to different objects of public utility, among others, to the plan for the organization of the Faculty of Medicine; and he took a part in the most remarkable resolutions of that body when it became the Constituent Assembly. After it had decided that crimes were *personal*, Guillotin proposed to substitute decapitation for other punishments, on the ground that, in the opinion of Frenchmen, that species of death did not attach infamy to the family of the criminal. The proposition was adopted: its author then pointed out a machine, which had been long known, as proper for the infliction of death, without giving any pain to the sufferer. Men of the best character at that time applauded the humane motives of the philanthropic deputy in selecting this instrument of punishment. Unfortunately for Guillotin, some wags gave his name to the machine, of which he was not the inventor, and which he had only brought into notice. Still more unfortunately, this machine became, in the hands of the ruffians who were masters of France during two years—the duration of which was equivalent to more than two centuries—the instrument of the most horrible vengeance, of the most odious crimes; and Guillotin, who was himself imprisoned, and ready to figure as a victim in the daily scenes of carnage with which our infamous tyrants glutted themselves, had a thousand times to grieve at seeing his name attached to the devastating axe with which the cannibals had armed their executioners. One feels

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astonished that Guillotin had not solicited permission from the government to relinquish a name which from that time must have been unsupportable to him. After the termination of his political career, Guillotin resumed the functions of a physician, which it would have been perhaps better for his own repose if he had never quitted. He enjoyed, up to his last moments, the esteem of all who knew him. Dr. Guillotin died on the 26th of May, 1814, aged seventy-six."

TREATMENT OF SPRAINS.

No accident occurs perhaps more frequently than that of sprain, wherefore we have thought some information concerning the nature of this accident, and the manner in which it should be treated, will not be unacceptable to our readers. We find in Mr. Liston's Elements of Surgery the following observations:—

"Sprain is generally occasioned by a fall, the foot or hand coming awkwardly to the ground, the muscles being at the same time relaxed and unprepared; by over-exertion in lifting heavy weights; by entanglement and twisting of the limb, &c. The ankle is often sprained by what is called 'a false step;' the fore part of the foot comes into contact with an obstacle unexpectedly; the foot is twisted under the limb; the weight of the body is thrown on the apparatus of one side of the joint, and this is in consequence immoderately and unnaturally stretched." Such is one of the most frequent ways in which this accident occurs. Then follows violent pain, and the patient feels sick and faint: the part injured becomes discolored, and a rapid swelling takes

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place, owing to the escape of blood from the torn vessels. Afterwards, from the excited action of the vessels, the fluid which lubricates the joint is increased in quantity, and the joint permanently deformed. "Attentive examination (says the surgeon) is required to guard against mistakes, the existence or non-existence either of displacement or of fracture, must be at once ascertained by determined and perfect manipulation; the parts must be pressed and moved to such an extent as is necessary, notwithstanding the pain thereby occasioned, and notwithstanding the resistance afforded by the patient." This caution is necessary, because one or more of the small bones of the rist are often displaced; and fracture of the fore arm, and even separation of one bone of the fore arm from the other, are accidents of by no means rare occurrence. "Perhaps," says Mr. Liston, "no injury is more frequently mismanaged by those both out and in the profession. Every old woman thinks she can manage a sprain; most absurd and hurtful measures are resorted to; cold lotions and cold effusions are employed, and at the same time stimulating frictions; probably attempts are made, either by leaching or by puncturing, to extract the effused blood; and many similar follies are committed.

"The proper treatment appears certainly to consist in absolute rest. If there is any displacement, it must be rectified immediately. If there is any fracture, or if there is a tendency to redisplacement after reduction, or if the patient is restless either from folly or insensibility, * * * * a splint or splints must be applied, to secure the immobility of the part, at the same time without such compression as may interfere with swelling from effusion (or escape of the watery part of the blood underneath

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the skin), which is a salutary process, and ought to be encouraged. By absolute rest, the extent of the swelling is limited, and inflammation warded off. Fomentations properly employed afford much relief. * * * The integuments soon become relaxed during the regular use of fomentation * * * The swelling then abates, and is no longer hard; it pits on pressure, and the skin has a puckered appearance. Then gentle friction becomes advantageous, and uniform support should be afforded by the application of a flannel roller. The longer the limb is disused, the more perfect and rapid is the recovery, provided the rest of the cure is properly conducted. In general, nothing more than what has been stated is required. But if the limb be moved in any way early, then necessity will arise perhaps for bleeding; certainly copious and repeated abstractions of blood by leeches, accompanied with fomentations, and the internal exhibition of antimonials, purgatives, &c. When such is the case, the cure is tedious; the joint long remains swelled and stiff; the patient is lame, and incapable of exertion. Leeching or puncturing at an early period, with the view of allowing extravasated blood to escape, is useless and hurtful. * * * Friction, with stimulating liniments, or even simple friction at an early period, is also hurtful, tending to excite the action of the vessels, and to convert simple swelling into inflammatory. The application of cold at any period is of little use, and ought certainly to be avoided immediately after the injury, as adding to the sufferings of the patient, and interfering with the natural processes that have commenced for the reparation of that injury. In limbs that have remained stiff after severe and mismanaged sprain, the dashing of water, either cold or tepid, has been strongly

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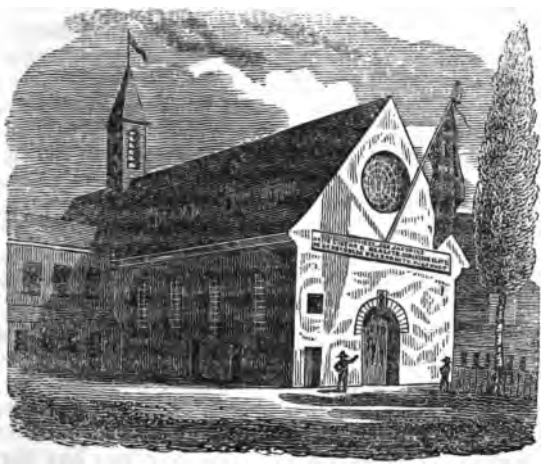
recommended: the practice is not ineffectual; the vessels of the surface are excited, perhaps, as by other friction, and perhaps by the reaction which follows the chill. But the limb is apt to become rheumatic, and, on this account, the state of matters will not be improved by this proceeding, unless it be resorted to with proper precautions." Such are the recommendations of this skilful surgeon for the general management of sprains, which are often very troublesome, and require the treatment of a judicious medical practitioner.



HALL OF THE JACOBINS.

Of the clubs of Paris the most influential in its day and for a long while afterwards, was that of the Jacobins, so called from its place of meeting, the Convent of the Jacobins in the Rue St. Honoré.

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The Jacobin Club had been originally established at Versailles, while the National Assembly sat there, by a few of the members of that body; but after it was transferred to Paris along with the legislature, it very soon began to open its doors to persons of much more violent politics than those of which it had at first consisted. It became in fact the nightly rendezvous of many of the most turbulent spirits of the capital, who gradually obtained such a sway over its deliberations that it was abandoned by most of its original members. The people, however, as we have said, continued to act upon the legislature through this, and similar societies, with an immense and daily increasing influence. But they did not long confine themselves merely to this manner of demonstrating their strength.

On the 18th of April, 1791, the King and the rest of the royal family had made preparations to leave the Tuileries for the Palace at St. Cloud; but before they had entered the carriage the tocsin had been sounded from the neighboring church of St. Roch, and a mob had collected in the Place du Carrousel, who continued to vociferate with a determined accent that the king should not leave the capital. His majesty's object in going to St. Cloud, they said, was only that he might have a better opportunity of making his escape from France.

It was in vain that Lafayette and Bailly used every effort to induce them to give way; and even the national guards refused to obey the orders of their commander to disperse the people. The consequence was, that the royal family were obliged to give up their design, and return to their apartments. It was upon this occasion that Lafayette, indignant at the treatment he had received, threw up his command; which he was only prevailed upon to take

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back some days afterwards on the earnest solicitations of the municipality, and the solemn promises of the troops themselves that they would in future yield him implicit obedience. As for the king, whatever his intentions may have been up to this time, he now certainly cherished the wish to escape, natural to a prisoner. No favorable opportunity of carrying his purpose into effect presented itself for some weeks; but on the night of the 20th of June, he and the queen, accompanied by the Dauphin and the princess Elizabeth, secretly left the Tuileries. They succeeded in getting out of the city, and took the road towards Montmedy, with the intention of afterwards throwing themselves into the strongly fortified town of Luxembourg, on the frontiers of the Low Countries, which was then in possession of the Emperor. But they were retaken on the third day of their flight at the town of Varennes, in the province of Lorraine, when more than two-thirds of their journey had been performed, and were brought back to Paris. They arrived at the Tuileries on the evening of the 25th; and next morning the Assembly declared the authority of the king to be suspended, and his person under arrest.

Hannah More. — This lady died recently, at Clinton, in the 80th year of her age. Few literary persons have had the good fortune to reap so plentiful a harvest of fame during their lives; and yet, we doubt whether, at this moment, more than one or two of her works be known, even by name, to the majority of our readers—the reader being, it is presumed, under five and twenty. Mrs. Hannah More was an amiable and accomplished lady, with much practical and worldly wisdom, and very strong religious feelings; her writings were addressed to a large and influential class, and their temporary success was proportionally great; but there is no trace in them of that original mind—or of that subtle developement of human feelings in its weakness and its strength, which can alone insure even the immortality of a life time to a writer who has the for-

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tune, good or ill, of living to eighty. Mrs. Hannah More came early into the literary world, ticketed and labeled, and patronized as a prodigy. She was introduced to Garrick, and Burke; and Reynolds, and Johnson, and Horace Walpole, and others, whose good word was fame, and she humored and flattered them, and was humored and flattered in return. Her first literary patron was Garrick, and she wrote tragedies: she was subsequently the bosom friend of Porteus, Bishop of London; and she denounced the theatre in its then state—as if it were different from its ordinary state—as not fit to be countenanced by a Christian people.

"Mrs. Hannah More was the daughter of an humble village schoolmaster in the neighborhood of Bristol, who was even unable to provide for her instruction in the ordinary accomplishments of female education; and she was indebted to the kindness of some neighboring ladies for those advantages. Her undoubted talent and exemplary conduct soon interested others in her behalf; and by their assistance she was enabled to open a school, by which, with her literary labors in aid, she in a few years accumulated a very handsome fortune.

"The only one of her works likely to be met with, except among very young people, is 'Cœlebs in Search of a Wife,' published in 1809, and which went through ten editions in a twelve month, we doubt whether ten copies be now sold in the same time. Her tragedies—The Inflexible Captive—Percy—The Fatal Falsehood—must be considered as utterly forgotten by the public. Early patronized herself, Mrs. More loved to play the patron; and in 1785 brought forward a Mrs. Yearsley, a milk woman, at Bristol, a poetical prodigy; her friends had a voice potential—and the public admired; the woman grew insolent upon her success; and the patron had to explain and excuse herself to friends against misrepresentation and abuse; the quarrel put an extinguisher on the prodigy; and except perhaps, Dr. Southey, who has a crop for all corn, and is a native of Bristol, it is more than probable that not a single literary man could be found who had ever read a line of Mrs. Yearsley's poetry. In 1804, Mrs. More published 'Hints towards forming the Character of a Young Princess,' written, it was said, expressly at the suggestion of Her late Majesty. Of its merits we know nothing: having no Princesses entrusted to our charge, we never read the book. Mrs. Hannah More was singularly, and not undeservedly, successful through life; her talents and her moral conduct deserved to be, but we think she was one of those few literary persons who had their reward while living."

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THE ROAD OF THE SIMPLON.

The Simplon is a mountain situated in the chain of the higher Alps, between the Valais and Redmont. At the beginning of the present century, a magnificent road was made over this mountain by order of Napoleon Bonaparte. This road was executed at the expense of the French government and of the kingdom of Italy. It extends from *Glis*

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to Domo d'Ossola, is twenty-five feet wide, and of a very gentle slope through the whole of its course.

The works on the side of Valais were directed by French engineers, and those on the southern part by Italians, who had much greater difficulties to encounter, being obliged continually to work upon the hardest rocks. This magnificent road, its bridges, and numerous galleries cut through the rock, must rank among the most remarkable monuments of the kind in the world. Add to this the beautiful and wild scenery which Nature has displayed so lavishly in this region, and there can be no wonder that it is a prominent object of curiosity to travellers.

The road begins at Glis, and after crossing a covered bridge of uncommon height and beauty over the Simplon, at the distance of a league and a half you reach Ried. You next go through a forest of larch trees, and after having proceeded along dreadful precipices, reach the first gallery, which is ten paces long. You now cross the Kander over a bridge eighty feet high, and after half an hour's walk you arrive at a few scattered houses called Persal, where you may procure refreshments. Beyond Persal, the road, which continues suspended over the brink of the precipice, continues half a league in long windings as far as the bridge of Oesbach. You then enter the second gallery which is thirty paces long.

You then leave on your left the glacier of Kaltwasser, from which descend four cascades, whose waters are carried across the road, in aqueducts of a beautiful construction, and then fall into the abyss. You then arrive at the third gallery, fifty paces long. At a short distance from this is the most elevated point, indicated by a kind of mile-stone.

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On the south side, the road is still more remarkable. A little beyond the fourth gallery, which is eighty paces long, you meet the beautiful cascade of the Frissinone; near which is the fifth gallery, and the longest of all, being two hundred and two paces in extent. At no great distance from Gondo where there is a tower seven stories high, is seen a cascade that falls from the defile of Zwischbergen, in which there is a gold mine. Before the new road was made, merchandise was transported on mules, and, in stormy weather, hundreds of beasts of burden were obliged to stop for shelter during several days at the inn of Gondo.

A little below Gondo, a small chapel is built, on the confines of the Valais and of Italy. The first Italian village is called San Marco; next comes Isella, or Dazio, where travellers are searched. You soon after enter a dreary defile which leads to the little village of Dwedro, occupying a pleasant district, though it is immediately surrounded by barren rocks. You then enter a narrow wild valley, pass over two bridges into the sixth and last gallery, and arrive at Crevola. Here you pass over the Veriola, across a bridge that is a master-piece of architecture and sixty yards long. From thence to Domo d' Ossola it is one league.

Whenever a storm succeeds several rainy days, it is advisable to stop at this place, to avoid the danger of being crushed to death by the stones that fall from the tops of the mountains. The valley is very narrow, most of the rocks are split, and the blocks on the summits, being rendered slippery by the rain, and loosened by the wind, fall along the rocks as thick as a shower of hail. Both in spring and winter this road is extremely dangerous.

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SPANISH ETIQUETTE.

BY D'ISRAELI.

The etiquette or rules to be observed in the royal palaces is necessary, writes Baron Bielfield, for keeping order at court. In Spain it was carried to such length as to make martyrs of their kings. Here is an instance, at which, in spite of the fatal consequences it produced, one cannot refrain from smiling.

Philip the Third was gravely seated by the fireside: the fire-maker of the court had kindled so great a quantity of wood, that the monarch was nearly suffocated with heat, and his *grandeur* would not suffer him to rise from the chair; the domestics could not *presume* to enter the apartment, because it was against the *etiquette*. At length the Marquis de Potat appeared, and the king ordered him to damp the fires; but *he* excused himself, alleging that he was forbidden by the *etiquette* to perform such a function, for which the Duke d'Usseda ought to be called upon, as it was his business. The duke was gone out; the *fire* burnt fiercer; and the *king* endured it, rather than derogate from his *dignity*. But his blood was heated to such a degree, that an erysipelas of the head appeared the next day, which, succeeded by a violent fever, carried him off in 1621, in the twenty-fourth year of his age.

The palace was once on fire; a soldier, who knew the king's sister was in her apartment, and must inevitably have been consumed in a few moments by the flames, at the risk of his life rushed in, and brought her highness safe out in his arms: but the Spanish *etiquette* was here wofully broken into! The loyal soldier was brought to trial, and, as it was impossible to deny that he had entered her apartment,

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the judges condemned him to die! The Spanish princess, however, condescended, in consideration of the circumstance, to *pardon* the soldier, and very benevolently saved his life!

When Isabella, mother of Philip the Second, was ready to be delivered of him, she commanded that all the lights should be extinguished; that if the violence of her pain should occasion her face to change color, no one might perceive it. And when the midwife said, "Madam, cry out, that will give you ease," she answerd, in *good Spanish*, "How dare you give me such advice? I would rather die than cry out."

> "Spain gives us *pride*—which Spain to all the earth
> May largely give, nor fear herself a dearth!"
>
> CHURCHILL.

Philip the Third was a weak bigot, who suffered himself to be governed by his ministers. A patriot wished to open his eyes, but he could not pierce through the crowds of his flatterers; besides that, the voice of patriotism heard in a corrupted court would have become a crime never pardoned. He found, however, an ingenious manner of conveying to him his censure. He caused to be laid on his table one day a letter sealed, which bore this address—"To the King of Spain, Philip the Third, at present in the service of the Duke of Lerma."

In a similar manner, Don Carlos, son to Philip the Second, made a book with empty pages, to contain the voyages of his father, which bore this title—"The Great and Admirable Voyages of the King, Mr. Philip." All these voyages consisted of going to the Escurial from Madrid, and returning to Madrid from the Escurial. Jests of this kind at length cost him his life.—

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THE SECRETARY BIRD.

This singular bird, with the legs of a crane and the head of an eagle, of which a characteristic representation is given in the above wood-cut, is an inhabitant of the southern parts of Africa. His presence there is a peculiar blessing to the natives; for they are indebted to him for the destruction of a vast quantity of insects and reptiles, whose multiplication, unless their numbers were thus kept down, would be a formidable calamity. The bird has been called by the names of secretary, messenger, archer, and lastly serpent-eater. The latter name truly indicates his habits;—the former are mere fanciful appellations. The first is derived from an imaginary resemblance of the bunch of long feathers that hang loose on the back of his head, to a pen stuck in the ear of a writer; the second refers to his rapid strides; and the third to a habit which he possesses of throwing straws with his beak some-

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thing in the manner of an arrow from a bow. He is still best known by the name of the Secretary.

The Secretary belongs to the class of rapacious birds, and he is now placed by naturalists between the vultures and eagles. He was formerly classed among the wading birds, on account of the length of his legs. His conformation, as well as his habits, attest the correctness of the more recent classification. The Secretaries, like the other large birds of prey, build their nests on the tops of the highest trees. They seek their food both on the dry sands and the pestiferous marshes. On the one they find serpents and lizards; in the other tortoises and large insects. Their mode of destroying life is very curious, for they always kill their prey before swallowing it. Whether the Secretary meet with a serpent or a tortoise, he invariably crushes it under the sole of his foot; and such is the skill and force with which he gives the blow, that it is very rarely that a serpent of an inch or more in diameter survives the first stroke. When he meets with a serpent that is large enough to oppose a long resistance to him, he flies off with his prey in his beak to a great height, and then dropping it, follows it in its descent with wonderful rapidity, so as to be ready to strike it when it falls stunned on the ground. M. le Vaillant describes an obstinate battle between a Secretary and a large serpent, in which the bird struck his enemy with the bony protuberance of his wing; but the mode of crushing with his foot is the more common.

The male and female equally labor in the construction of their large nest, in which the female generally lays two eggs. Their unions do not take place till after the most obstinate battles among the males. In general these birds exhibit no fierce-

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ness, and they are easily domesticated. Their natural habits must be of singular advantage to man in places where reptiles abound; and for this reason the French have endeavored to establish the Secretary in their colonies of Guadeloupe and Martinique.

ANTIPATHIES TO ANIMALS.

Many men have strange antipathies to animals. Some of these are accountable as depending upon form; others, profoundly mysterious in the why and the wherefore. Ladies generally fall into hysterics at the approach of a spider. Snakes are generally objects of fear, rather than antipathy, from the deadly power which some of the species possess; but why a beautiful lizard, a sleek mouse or a rat, should be objects of antipathy, it is difficult to conjecture: elegant in form, and harmless, they might at least be looked upon with complacency. The sight of a rat has been known to throw even the male sex into convulsions. Claude Prosper Juliot de Crebillon, a name conspicuous in the annals of French literature, was confined in the Bastile, in pursuance of the caprices of one of the old Bourbon satraps, who often shut up in dungeons the men of the age most conspicuous for talent, and who were known to promulgate unsavory truths. One night, Crebillon felt what he thought to be a cat reposing by his side in bed: glad of such a companion in that silent mansion, where to many a prisoner "hope never came," he stretched out his hand to caress it; but it ran away. The following day, when seated at his dinner, he saw, through the "darkness visible" of his cell, an animal squatted, *vis-a-vis*, on his table, and was

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soon able to perceive that it had a long slender tail, and was not a cat, which at first he imagined it to be, but an enormous rat. He had an unconquerable antipathy to rats; and, springing from his seat, cried aloud with terror, and overturned his table; the noise brought in a turnkey, who found him pale, and nearly senseless; and it was a long time ere he recovered himself. This animal had been the companion of a preceding prisoner, who had tamed it; and so well did the horrible solitude of the Bastile operate in removing the antipathy of Crebillon to these creatures, that at length he became reconciled to its company, and even shared his provisions with it. The case of Crebillon may serve as a useful hint for effecting the cure of most other antipathies to animals.

Many men have also strange antipathies to cats; and so strongly does the sight of them affect some individuals, that their whole frame becomes agitated. A striking instance of this kind came within our own personal knowledge. The late Captain Logan, of Knockshinnock, in Ayrshire, had such an unconquerable aversion to all cats, that he would not remain in the room with one on any account whatever. We have known ladies to expostulate with him on the affectionate and harmless dispositions of their grimalkins, vowing that they would touch nothing larger than a rat; but their eloquence was invariably lost on the captain, who lent a deaf ear to all their pleadings.

He could detect immediately the presence of a cat from smell, even although he could not possibly see it in the room, being under a sofa, or some such place; and he uniformly insisted on its being turned out of the room, before he would compose himself to enter into conversation.

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On one occasion, while his regiment was stationed in Tynemouth, we happened to accompany the captain to pay a visit to the family of General R——. We found several visiters in the house besides the family. Among the rest was the late Sir C—— G——, then commanding the northern district of England, and some officers of his staff. When deeply engaged in a political conversation on the events of the times, the domestic cat, a frolicsome young animal, came scampering into the room, when the gallant captain started from his seat, and mounted a chair with all possible alacrity, to the no small astonishment of all present, as none of them were aware of his dread of cats. Every body supposed the captain had been seized with a sudden fit of lunacy; the ladies bounced up, several made their way towards the door, and even the two patriot generals and the staff-officers seemed to entertain doubts as to their personal safety; and, in particular, we noticed Sir C—— G—— keeping an attentive watch on the handle of the captain's sword. In short, every countenance but our own bore marks of anxiety, and we laughed outright, to the no small displeasure of the general's lady, who thought it no joke, and entreated us to pacify our friend.

We must mention, that Captain Logan was then a man of about thirty years of age, six feet one inch in height, and of a very athletic form; so, to be subjected to the grasp of such an individual was no joke, as the general's lady expressed herself; but as we knew the poor captain was quite *compos* and harmless, we enjoyed the joke amazingly. The old general entreated of him to come down, while the captain obstinately refused until puss was dismissed. The general in vain tried to convince

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him of her innocent intentions, which increased the convictions of all present that the captain was cracked. By this time all the ladies had made good their retreat, and some of the younger ones stood peeping in at the door, with the handle in their hand, in case of the captain trying to follow them. Things beginning to assume a serious aspect, we lifted puss, and rung the bell for a servant to remove it out of the room, after which the captain descended, and in a few minutes resumed his wonted coolness. An explanation followed, and this irresistible infirmity of the captain's was felt, by those who witnessed the ludicrous scene, more with pity than contempt; and we will venture to say, that such was the impression which was made at the time, that none who witnessed it will ever forget the scene.

THE PERSECUTIONS OF GENIUS.

The successful efforts of genius have not been more remarkable in the biography of eminent individuals, than the miseries which have often, during barbarous times, been endured by men of learning and scientific skill, through the ignorance of the very persons whom they intended to benefit. It is only, indeed, in the present age that we find the discoverers of new arts and sciences rewarded with the approbation of their fellows, if not with more substantial gifts; and in considering what has from first to last been the amount of the cruel persecutions of the learned, the existing generation can hardly believe it credible that so much wanton abuse of power can have been exercised. On this subject of melancholy interest, D'Israeli, in his Curiosities of Literature, has collected a variety of

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striking particulars. "Before the times of Galileo and Harvey (says this accurate writer), the world believed in the diurnal immovability of the earth, and the stagnation of the blood; and for denying these, the one was persecuted, and the other ridiculed. The intelligence and virtue of Socrates were punished with death. Anaxagoras, when he attempted to propagate a just notion of the Supreme Being, was dragged to prison. Aristotle, after a long series of persecutions, swallowed poison. The great geometricians and chemists, as Gerbert, Roger Bacon, and others, were abhorred as magicians. Virgilus, Bishop of Saltzburg, having asserted that there existed antipodes, the Archbishop of Mentz declared him a heretic, and consigned him to the flames; and the Abbot Trithemius, who was fond of improving stenography, or the art of secret writing, having published some curious works on that subject, they were condemned, as works full of diabolical mysteries. Galileo was condemned at Rome publicly to disavow his sentiments regarding the motion of the earth, the truth of which must have been abundantly manifest: he was imprisoned in the Inquisition, and visited by Milton, who tells he was then *poor* and *old*. Cornelius Agrippa—a native of Cologne, and distinguished by turns as a soldier, philosopher, physician, chemist, lawyer, and writer, was believed to be a magician, and to be accompanied by a familiar spirit in the shape of a black dog. He was so violently persecuted that he was obliged to fly from place to place; the people beheld him as an object of horror, and not unfrequently, when he walked, he found the streets empty at his approach: this ingenious man died in an hospital. When Urban Grandier, another victim of the age, was led to the stake, a large

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fly settled on his head: a monk, who had heard that Beelzebub signifies in Hebrew the God of Flies, reported that he saw this spirit come to take possession of him.

"Even the learned themselves, who had not applied to natural philosophy, seem to have acted with the same feelings, as the most ignorant; for when Albertus Magnus—an eminent philosopher of the thirteenth century—constructed an automaton, or curious piece of mechanism, which sent forth distinct vocal sounds, Thomas Aquinas (a celebrated theologian) imagined it to be the work of the devil, and struck it with his staff, which, to the mortification of the great Albert, annihilated the labor of thirty years. Descartes was horribly persecuted in Holland when he first published his opinions: Voetius, a person of influence, accused him of atheism, and had even projected in his mind to have this philosopher burnt at Utrecht in an extraordinary fire, which, kindled on an eminence, might be observed by the seven provinces. This persecution of science and genius lasted till the close of the seventeenth century."

CURRAN'S INGENUITY.

A farmer, attending a fair with a hundred pounds in his pocket, took the precaution of depositing it in the hands of the landlord of the public house at which he stopped. Having occasion for it shortly afterwards, he resorted to mine host for the bailment, but the landlord, too deep for the countryman, wondered what hundred was meant, and was quite sure no such sum had ever been lodged in his hands by the astonished rustic. After ineffectual appeals to the recollection, and finally to the

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honor of Bardolph, the farmer applied to Curran for advice. "Have patience, my friend," said the counsel: "speak the landlord civilly, and tell him you are convinced you must have left your money with some other person. Take a friend with you, and lodge with him another hundred in the presence of your friend, and then come to me." We must imagine and not commit to paper, the vociferations of the honest dupe, at such advice; however, moved by the rhetoric or authority of the worthy counsel, he followed it, and returned to his legal friend. "And now, sir, I don't see as I'm to be better off for this, if I get my second hundred again: but how is that to be done?" "Go and ask him for it when he is alone," said the counsel. "Ay, sir, but asking won't do, Ize afraid, without my witness at any rate." "Never mind, take my advice," said the counsel; "do as I bid you, and return to me." The farmer returned with his hundred, glad at any rate to find that safe again in his possession. "Now, sir, I suppose I must be content; but I don't see as I'm much better off." "Well, then," said the counsel, "now take your friend with you, and ask the landlord for the hundred pounds your friend saw you leave with him." We need not add, that the wily landlord found he had been taken off his guard, while our honest friend (whom one would almost wish to have tried two the second time) returned to thank his counsel exultingly, with both hundreds in his pocket.

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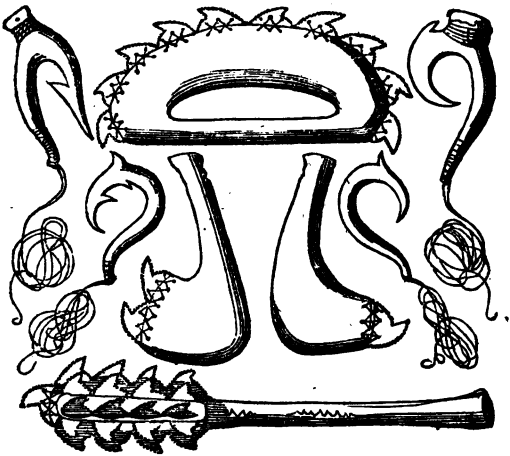

NEW ZEALANDERS FISHING.

One of the chief sources of natural wealth which New Zealand possesses, consists in the abundance and variety of the fish which frequent its coasts. Wherever he went, Captain Cook, in his different visits to the two islands, was amply supplied with this description of food, of which he says, that six or eight men, with hooks and lines, would in some places catch daily enough to serve the whole ship's company. Among the different species which are described as being found, we may mention macker-

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el, lobsters, crawfish, a sort called by the sailors cole-fish, which Cook says was both larger and finer than any he had seen before, and was, in the opinion of most on board, the highest luxury the sea afforded them; the herring, the flounder, and a fish resembling the salmon. To these may be added, besides many other species of shell-fish, mussels, cockles, and oysters.

The seas in the neighborhood of New Zealand also, we ought not to forget to add, are much frequented by whales, which, besides the value of their blubber, are greatly prized by the natives for the sake of their flesh, which they consider a first rate delicacy. The New Zealanders are extremely expert in fishing. They are also admirable divers, and Rutherford states that they will bring up live fish from the deepest waters, with the greatest certainty. The hooks and other implements for fishery, which they make of bone, are of various forms. Above are specimens.

LITHOGRAPHY.

BY SAMUEL LEITH, ESQ.

Lithography is the art of printing from stone. It is only of recent invention, and differs very considerably in principle from the art of printing from movable types, wooden blocks, or copper or other plates. The process consists in writing on a particular kind of stone, and from thence working off, by a press, any number of copies, the writing thus standing in relief on the stone like raised letters. The peculiar value of this ingenious art is in the cheapness and ease with which it accomplishes im-

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pressions of pictorial delineations or manuscript. The discovery of the lithographic art was made, upwards of thirty years since, by Senefelder, a native of Germany — a country to which the human race is also indebted for the more noble art of printing from types; but since that period very great improvements have been made upon it in Britain.

The history of the origin of lithography is instructive, and affords to the young an additional instance of the triumph of genius over poverty and its attendant disadvantages. Like every new invention, when first attempted to be brought into notice, it met with all the obstacles which ignorance and prejudice could throw in its way; and it was not till after years of laborious perseverance, accompanied with all the evils attendant on very limited means, that the inventor succeeded in establishing his reputation, and gaining for the new art its due degree of admiration.

Senefelder relates, with the greatest candor, that having become an author, and at the same time being so poor that he could not raise the necessary funds for the printing of his work with a view to publication, he endeavored to devise some method by which his object might be attained; and, after much anxious consideration, he resolved on attempting to accomplish it with his own hands. With this view, his attention was first directed to several original and curious modes of stereotype, some of which he considerably matured; and had his circumstances at this period been such as to admit of his devoting a sufficient time to the perfecting of this first part of his undertaking, it is questionable whether his talents would have ever been *forced* into that particular line of study, which, in the end, acquired for his name so great a celebrity. The same

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remark is applicable to some of the other ingenious attempts which preceded his great discovery. For a time, however, plan succeeded plan, each being abandoned in turn, as new and more plausible theories struck his fancy, and in this way did he persevere, for many months, with various degrees of success, but without the necessary results; and he at last relinquished this course of experiments altogether, as presenting too many obstacles to be overcome by an individual in his circumstances.

Disappointed, but not disheartened, in not having been so successful in his operations as he had anticipated, we next find him attempting to realize his hopes by substituting plates of copper and tin for his metal and composition blocks; but this second course of experiments was attended with little better success than the former; for, after much labor, and numerous trials with the etching needle, and by writing on the copper with different chymical inks of his own composition, this medium was found to be liable to all the objections which had deterred him from prosecuting the stereotype plan. Being, however, still of the opinion that his object was to be accomplished by *art* alone, and having laid aside his copper plates for a time as too expensive, he began to look around for a substitute which would supply their place for all the purposes of practice, and at a much less cost. He was not long in determining this point; for, being aware that certain kinds of stone had often been used for similar purposes, he converted the slab on which he ground his colors into a plate for exercising in writing, and found it answered his expectations completely. Experiments now followed each other in rapid succession, all tending to encourage him in the prosecution of his design; and when at length these stone plates were

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rendered fit for undergoing the operations of the printing press, he was greatly pleased to find that numerous impressions might be taken on paper, without materially injuring the original.

We shall now at once advert to the time when circumstances conspired to force upon his attention those properties of the art which, on their first unfolding themselves, so astonished and delighted him. "I had (says he) just succeeded in my little laboratory in polishing a stone plate which I intended to cover with etching ground, in order to continue my exercises in writing backwards, when my mother entered the room, and desired me to write her a bill for the washer-woman, who was waiting for the linen. I happened not to have even the smallest slip of paper at hand, as my little stock of paper had been entirely exhausted by taking proof-impressions from the stones; nor was there even a drop of ink in the inkstand. As the matter would not admit of delay, and we had nobody in the house to send for a supply of the deficient materials, I resolved to write the list with my chemical ink, on the stone which I had just polished, and from which I could copy it at leisure."

When about to remove this writing from the stone some time afterwards, the idea struck him, that, by submitting its surface to the action of aquafortis, such an elevation might be given to the writing as would render it suitable, in the same way as wood-engravings, for receiving printing ink. The experiment exceeded his most sanguine hopes, and he lost no time in following up his success with others, all tending to convince him that he had discovered a new and important art.

Thus it will be seen, that, to a very simple occurrence in itself, Senefelder was indebted for the

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hint on which hinged all his succeeding improvements.

Having now briefly adverted to some of the leading incidents which ultimately led to the discovery of chemical lithography, we shall next proceed to the notice of such particulars concerning the progress of the new art under the fostering care of its author, as may be thought generally interesting.

Let it not be imagined that Senefelder's difficulties ceased with this discovery: the fact is otherwise; for, in addition to the many obstacles which he had to combat from lacking the necessary funds for the prosecution of his labors, others were not wanting of a nature equally serious, and which were to him the source of long and painful anxiety. Among the rest, it was not a little annoying to know that others were beginning to lay claim to the merit of a new discovery But these, and other particulars connected with this part of our subject, must form matter for a future article.

THE ITALIAN SLEEP-WALKER.

In the recently-published cheap and elegant edition of Goldsmith's works, forming part of the series of publications entitled "The British Library," we are presented with many pieces not hitherto generally known as the productions of the ingenious author of the Vicar of Wakefield. Among others, is the following little sketch, descriptive of a remarkable instance of walking in sleep:—

It has often been a question in the schools, whether it be preferable to be a king by day, and a beggar in our dreams by night; or, inverting the question, a beggar by day, and a monarch while

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sleeping? It has been usually decided, that the sleeping monarch was the happiest man, since he is supposed to enjoy all his happiness without contamination; while the monarch in reality feels the various inconveniences that attend his station.

However this may be, there are none sure more miserable than those who enjoy neither situation with any degree of comfort, but feel all the inconveniences of want and poverty by day, while they find a repetition of their misery in a dream. Of this kind was the famous Cyrillo Padovano, of whom a long life has been written; a man, if I may so express it, of a double character, who acted a very different part by night from what he professed in the day. Cyrillo was a native of Padua, in Italy, a little brown-complexioned man, and, while awake, remarkable for his simplicity, probity, piety, and candor; but, unfortunately for him, his dreams were of the strongest kind, and seemed to overturn the whole system of waking morality; for he every night walked in his sleep, and, upon such occasions, was a thief, a robber, and a plunderer of the dead.

The first remarkable exploit we are told of Cyrillo, was at the university, where he showed no great marks of learning, though some of assiduity. Upon a certain occasion, his master set him a very long and very difficult exercise, which Cyrillo found it impossible, as he supposed, to execute. Depressed with this opinion, and in certain expectation of being chastised the next day, he went to bed quite dejected and uneasy; but awaking in the morning, to his great surprise he found his exercise, completely and perfectly finished, lying upon his table, and, still more extraordinary, written in his own hand. This information he communicated to his master when he gave up his task, who, being equal-

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ly astonished with him, resolved to try him the next day with a longer and a more difficult task, and to watch him at night when he retired to rest. Accordingly, Cyrillo was seen going to bed with great uneasiness, and soon was heard to sleep profoundly: but this did not continue long: for, in about an hour after he lay down, he got up, lighted his candle, and sat down to study, where he completed his work as before.

A mind like Cyrillo's, not naturally very strong, and never at rest, began, when he arrived at manhood, to become gloomy, solicitous, and desponding. In consequence of this turn of thinking, he resolved to leave the world and turn Carthusian, which is the most rigorous of all the religious orders. Formed for a severe and abstemious life, he was here seen to set lessons of piety to the whole convent, and to show that he deserved the approbation as well of his fellows in seclusion as of the whole order. But this good fame did not last long; for it was soon found that Cyrillo walked by night, and, as we are told of the fabled Penelope, undid in his sleep all the good actions for which he had been celebrated by day. The first pranks he played were of a light nature, very little more than running about from chamber to chamber, and talking a little more loosely than became one of his professed piety. As it is against the rules of the fraternity to confine any man by force to his cell, he was permitted in this manner to walk about; and though there was nothing very edifying in his sleeping conversation, yet the convent were content to overlook and pity his infirmities.

Being carefully observed upon one of these occasions, the following circumstances offered:—One

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evening, having fallen asleep on his chair in his cell, he continued immovable for about an hour; but then, turning about in the attitude of a listener, he laughed heartily at what he thought he heard spoken; then snapping his fingers, to show he did not value the speaker, he turned towards the next person, and made a sign with his fingers, as if he wanted snuff. Not being supplied, he seemed a little disconcerted; and, pulling out his own box, in which there was nothing, he scraped the inside as if to find some. He next very carefully put up his box again; and, looking round him with great suspicion, buttoned up the place of his frock where he kept it. In this manner he continued for some time immovable; but, without any seeming cause, flew into a most outrageous passion, in which he spared neither oaths nor execrations, which so astonished and scandalized his brother friars, that they left him to execrate alone.

But it had been well if poor Cyrillo went no farther, nor driven his sleeping extravagances into guilt. One night he was perceived going very busily up to the altar, and, in a little beaufet beneath, to rummage with some degree of assiduity. It is supposed that he wished to steal the plate which was usually deposited there, but which had accidentally been sent off the day before to be cleaned. Disappointed in this, he seemed to be extremely enraged; but not caring to return to his cell empty-handed, he claps on one of the official silk vestments; and finding that he could carry still more, he put one or two more over each other, and thus cumberously accoutred, he stole off with a look of terror to his cell; there hiding his ill-got finery beneath his mattress, he laid himself down to continue his nap. Those who had watched him during this interval

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were willing to see his manner of behaving the morning after.

When Cyrillo awaked, he seemed at first a good deal surprised at the lump in the middle of his bed; and going to examine the cause, was still more astonished at the quantity of vestments that were bundled there. He went among his fellows of the convent, inquired how they came to be placed there; and, learning the manner from them, nothing could exceed his penitence and contrition.

His last and greatest project was considered of a still more heinous nature. A lady, who had long been a benefactress to the convent, happening to die, was desirous of being buried in a cloister, in a vault which she had made for that purpose. It was there that she was laid, adorned with much finery, and a part of her own jewels, of which she had great abundance. The solemnity attending her funeral was magnificent, the expenses great, and the sermon affecting. In all this pomp of grief, none seemed more affected than Cyrillo, or set an example of sincerer mortification. The society considered the deposition of their benefactress among them as a very great honor, and masses in abundance were promised for her safety. But what was the amazement of the whole convent the next day, when they found the vault in which she was deposited broken open, the body mangled, her fingers, on which were some rings, cut off, and all her finery carried away! Every person in the convent was shocked at such barbarity, and Cyrillo was one of the foremost in condemning the sacrilege. However, shortly after, on going to his cell, having occasion to examine under his mattress, he there found that he alone was the guiltless plunderer. The convent was soon made acquainted with his misfortune; and, at the

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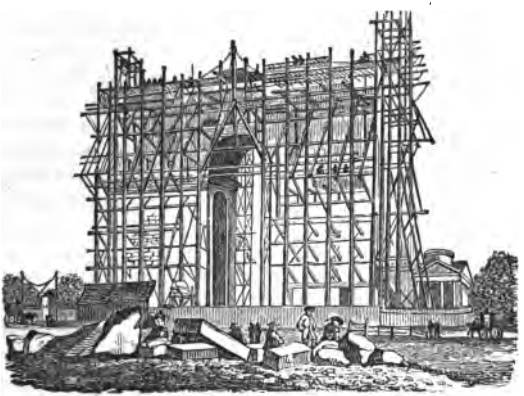
general request of the fraternity, he was removed to another monastery, where the prior had a power, by right, of confining his conventuals. Thus debarred from doing mischief, Cyrillo led the remainder of his life in piety and peace.



ARCH OF L'ETOILE.

The arch of l'Etoile was begun by Napoleon in 1806, to commemorate the victories which had crowned the arms of France under his sovereignty; and was intended to form the most colossal monument of the kind which had ever been erected. Its height was to rise to one hundred and thirty-three feet, the breadth or span being one hundred and thirty-eight, and the thickness sixty-eight feet. Workmen were employed upon the structure for eight years, and immense sums of money were expended upon it.

On the 1st of April, 1810, when the Empress

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Maria Louisa made her entry into Paris, a representation of the finished arch was erected of wood, which, being covered over with painted cloth, gave a sufficiently accurate notion of the whole design, and had a magnificent appearance. Notwithstanding Dulaure's anticipations, Charles X had some years ago given orders for prosecuting the construction of this vast monument; and the work was proceeding, we believe, with considerable activity when the events of July occurred,—the intention, however, being to dedicate the memorial to the exploits of the Duc d'Angouleme in Spain, a miserable substitution, it must be acknowledged, for the original design. Above is a cut of it as it appeared with the scaffolding around it immediately after the recent revolution.

MECHANICAL POWER.

Mr. Robert Owen calculates that two hundred arms, with machines, now manufacture as much cotton as twenty millions of arms were able to manufacture without machines forty years ago; and that the cotton now manfactured in the course of one year, in Great Britain, would require, without machines, sixteen millions of workmen with simple wheels. He calculates further, that the quantity of manufactures of all sorts produced by British workmen with the aid of machines is so great, that it would require, without the assistance of machinery, the labor of four hundred millions of workmen

In the wool manufacture, machines possess an eminent advantage over common wheels. The yarn on thirty or thirty-six spindles is all equally twisted and drawn to the same degree of fineness. The most dexterous spinners cannot twist so equally and so

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gently twenty slips of yarn from wool of the same quality, as a machine can do twenty thousand.

At one of the cotton mills in Manchester yarn has been spun so fine, as to require 350 hanks to weigh one pound avoirdupois. The perimeter of the common reel being one yard and a half, 80 threads or revolutions would measure 120 yards; and one hank seven times as much, or 840 yards, which multiplied by 350, gives 294,000 yards, or 167 miles and a fraction.

A steam-engine of the ordinary pressure and construction, with a cylinder of thirty inches in diameter, will perform the work of forty horses; and, as it may be made to act without intermission, while horses will not work more than eight hours in the day, it will do the work of one hundred and twenty horses; and as the work of a horse is equal to that of five men, it will perform as much as six hundred men can; while its whole expense is only equal to about half the number of horses for which it is substituted.

The only purpose to which steam-engines were first applied was the raising of water from coal-pits, mines, &c.; but they are now used for many different purposes in which great power is required. Mr. Bolton applied the steam-engine to his apparatus for coining; and, by the help of four boys only, it was capable of striking thirty thousand pieces of money in an hour; the machine itself was made to keep an accurate account of the number struck off.

POETICAL QUID PRO QUO.

A Greek poet frequently offered little compliments to Augustus, with hopes of some small reward. His poems were worthless and unnoticed, but as he

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persisted in his adulation, Augustus amused himself with writing an epigram in praise of the poet, and when he received the next customary panegyric, presented his lines to the bard with surprising gravity. The poor man took and read them, and with apparent delight deliberately drew forth two farthings, and gave them to the emperor, saying—"This is not equal to the demands of your situation, sire; but 't is all I have: if I had more I would give it to you." Augustus could not resist this; he burst into laughter, and made the poet a handsome present.

Pickpockets.—The old robbers, in the "good old times," when purses were carried in the hand or borne at the side, cut them away, and carried them off with the contents, and hence they were called "cut-purses." In the scarce "History of Highwaymen," by Smith, there is a story of a ludicrous private robbery, from "the person" of a man, mistakenly committed by one of these cut-purses.

Angling Anecdote.—In 1822, two young gentlemen of Dumfries, while enjoying the amusement of fishing at Dalswinton loch, having expended their stock of worms, &c., had recourse to the well-known expedient of picking out the eyes of the dead perches, and attaching them to their hooks—a bait which the perch is known to rise at quite as readily as any other. One of the perches caught in this manner struggled so much when taken out of the water, that the unseen, though not unfelt hook had no sooner been loosened from its mouth than it came in contact with one of its eyes, and actually tore it out. The pain occasioned by this accident only made the fish struggle the harder, until at last it fairly slipped through the holder's fingers, and again escaped to its native element. The disappointed fisher, still retaining the eye of the aquatic fugitive, adjusted it on the hook, and again committed his line and cork to the waters. After a very short interval, the latter substance began to bob, when, pulling up the line, he was astonished to find the identical perch that had eluded his grasp a few minutes before, and which literally perished by *swallowing its own eye!*

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LIVERPOOL AND MANCHESTER RAILROAD.

This railroad is thirty-seven miles in length, and is the greatest work of the kind in England. Beginning at Liverpool, this road enters an open cutting twenty-two feet deep, with four lines of railway, and leading to the mouth of the great Tunnel, which is twenty-two feet wide and sixteen high. The sides are perpendicular for five feet above the floor, and surmounted by a semi-circular arch.

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This tunnel is cut through a strata of red rock, blue slate and clay, and is 6750 feet, or above a mile and a quarter in length. The whole extent of this vast cavern is lighted with gas, and the sides and roof are whitewashed, to give a greater effect to the illumination.

The road in the tunnel curves and begins a gentle ascent toward the east. At this extremity, the road leads into a wide area, forty feet below the surface of the ground, cut out of the solid rock, and surmounted on every side by walls and battlements. From this area a small tunnel returns towards Liverpool. Proceeding eastward from the area, the traveller finds himself upon the open road to Manchester, moving upon a perfect level, the road slightly curved, clear, dry, free from obstruction, and the rails firmly fixed upon massive blocks of stone. After some time it descends very gradually, and passes through a deep cutting, under large stone archways. Beyond this, the road leads through the great rock excavation of Olive Mount, which is seventy feet deep, and only wide enough for two trains of carriages, to pass each other, as represented in the preceding cut.

After leaving this, it approaches the great Roby bank, stretching across a valley two miles in width, and varying from fifteen to forty-five feet in height. Here the traveller finds himself mounted above the tops of the trees, and looks round over a wide expanse of country. After some further curves, and passing several other banks, bridges, and cuts, the road is carried into the city of Manchester.

The track is double. The rails are of wrought iron, laid sometimes on stone, but where the foundation is less firm, upon wood. The whole work cost 820,000 pounds sterling.

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ATTRACTION.

Before proceeding farther, it may be necessary to inform the reader of the manner in which gravitation operates on its amplest scale in regulating the movements of the unnumbered orbs which compose the system of the universe. All bodies have a tendency to continue in the state of *motion* or of *rest* in which they are put. In other words, bodies do not acquire motion, nor lose motion, nor change the kind or degree of their motion, unless some force or another be applied to them. This property, as it may be termed, is called in scientific language, the *inertia* of matter. For instance, when an arrow is shot from a bow, it would proceed onward through the infinity of space to all eternity, if some force did not curb its speed, and finally draw it to the earth. And what power is this? Plainly that of attraction. Besides, there is the resistance which the air offers to every body heavier than itself passing through it. Now, space originally was a vast vacuity, we shall suppose, in which there being no matter, there could exist none of the laws of matter. When the Divine Creator brought into existence our own system, to take a familiar instance, he placed the sun in the centre, and endowed it, so to speak, with power and authority over all the other bodies within its range; they were compelled to pay obeisance to it like the surrounding sheaves to the central one in Joseph's dream. The lesser or subordinate orbs may be supposed, for the sake of illustration, to have been hurled from the plastic hands of the Deity in a straightforward course, in which they would forever have moved, had not the sun possessed the power of attracting them to its centre, and compelling

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them to revolve round him. There was just as much attraction given as would keep them in their proper orbits of motion, and just that degree of impetus imparted which would prevent them from coalescing with the sun on the one hand, or departing beyond the sphere of his attraction on the other. With what wisdom, and yet with what simplicity, have not the "worlds been framed." To each of them the Creator has traced out its course. "Thus far shalt thou go, and no farther." And they cannot for a moment cross the boundaries he has assigned.

> "Lightnings and storms his mighty word obey,
> And planets roll where he has marked the way."

To this principle we are also indebted for the flux and reflux of the tides, which, as is well known, are caused by the moon's attraction

> "For this the moon through heaven's blue concave glides,
> And into motion charms the expanding tides;
> While earth impetuous round her axle rolls,
> Exalts her watery zone and sinks the poles."—*Falconer.*

It is also the cause of the roundness of our earth, of the moon, the planets, and the sun itself. Hence it may be inferred that originally all matter was, to a certain extent, in a fluid state, and that at the divine behest the atoms were endowed with attractive qualities, by which they were impelled to a common centre; and thus the congregated masses assumed a globular form. At New South Wales, which is situated nearly opposite to England on the earth's surface, planets hang and stones fall towards the centre of the globe, just as they do here. And the people there are standing with their feet towards us; hence they are called our antipodes, from two Greek words—*anti* opposite, and *pŏdĕs* the feet. A plummet suspended near the side of a mountain

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will be attracted to it in a degree exactly proportioned to its magnitude. This fact was ascertained by Dr. Maskeleyne near the mountain Shehallion in Scotland. But the plummet was not so strongly attracted to the mountain as it was to the earth, because the magnitude of the latter was so much greater than that of the former. Let it always be kept in view that it is size, in connexion with distance, which determines the force of gravitation, and this may be illustrated by a few familiar facts.

A falling body receives fresh velocity every moment of its descent, while a body projected into the air loses velocity every moment of its ascent. Both propositions are illustrated by a very simple experiment. Sling a stone into the air, and the eye will be found incapable of following it till it has reached a certain height, when we can easily observe its progress. Upwards it rises slower and slower, and for a moment before it has reached and after it has passed its climax, there is scarcely any motion perceptible; just as the tide at the full appears for a moment neither to ebb nor to flow. Downwards the stone descends, however, gathering fresh velocity in every inch of its declination, until, as it approaches nearer to the earth, the eye can scarcely follow it. This may, no doubt, be partly accounted for from the well known circumstance, that, to the eye, bodies seen at a distance seem to move slower than they do when we stand nearer to them. But, in our calculations, the fallacy arising from this circumstance is comparatively trifling. The propositions have not only been proved by the most incontestable philosophical experiments, but a few familiar facts, when recalled to memory, will settle the point. Let a ball drop from the hand, and it can be caught easily the first instant; let it accu-

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mulate its motion, however, and the hand in vain pursues it. Take an instance on a vast scale—say the cataract of Niagara. Slow and heavily the broad column of waters bend over the precipice. It grows thinner and thinner, while its motion rapidly increases, until at last it plunges down the deep descent into the Phlegethon below, with irresistible force and swiftness, carrying all before it, and

"Rivalling the lightning's glance in ruin and in speed."

All bodies, whatever their size or weight may be, should, from the law previously laid down, fall to the ground with the same speed. But this is found not to be the case. Here, for instance, is a ball of lead and a ball of cotton dropped from the same altitude at the same moment, and the lead has reached the earth sometime before the cotton. At first sight this would really appear to be quite consistent with the law of nature; because there being, we shall say, an hundred parts more matter in the bullet than in the cotton, it will be drawn to the earth with an hundred times more force, the power of gravitation being always proportioned to the quantity of matter. But again, if there be an hundred parts more matter in the lead than in the other body, it of course requires an hundred times more attraction to bring it down, for bodies destitute of this quality, as was formerly observed, have no tendency to fall; and every atom of every description of matter is drawn to the earth with the same degree of force. What is it, then, which prevents the cotton from reaching the ground at the same moment with the weightier body? The resistance of the air. The bulks are equal, and of course the resistance offered to both is alike, but the one having a far greater number of

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atoms, and hence a far greater power of attraction in proportion to its bulk than the other, it overcomes the resistance with greater ease, or, in other words, it has far greater strength to expend with only the same obstructions to overcome, and hence it reaches its destination sooner. For illustration's sake, let us suppose there are two boats to start for the same goal. They are of equal size, and of course their bows present the same breadth of surface to the water, and are alike impeded by it. In the one boat there are two rowers, we shall suppose, and in the other six. They all pull with equal skill and power, and it is unnecessary to say which boat will reach its destination first. But suppose that the boat which had the smallest number of rowers were to be reduced in size, weight, and resistance in a proportion which exactly counterbalanced the power which the other had over it, they would both arrive at the same time. Thus, if the cotton ball were reduced to the density of the lead, they would both reach the earth at the same time. The powers of attraction possessed by the two substances, without attenuating our simile to an invisible thinness, may be compared to the physical energy exercised in the two several boats, and though the comparison be not perfect in some respects, it is sufficiently so in others to give a forcible illustration of the subject. In fine, it is found that in the exhausted receiver of an air-pump, that is, a glass vessel deprived of its air, a feather and a guinea fall to the bottom at the same instant. It would not serve the end contemplated were the subject of gravitation to be pursued through all its labyrinths, and demonstrated by mathematical symbols. The point aimed at is rather to kindle up a desire for philosophical study, than to supply the

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materials of it. We do not mean to conduct the reader through the promised land, but only point it out from Mount Pisgah.

Very little need be said respecting the *magnetic* and *electric* attractions. They act only on certain bodies, or under peculiar circumstances, giving rise to a distinct class of phenomena. In so far as they operate on masses of matter at sensible distances, they coincide with gravitation. When certain bodies are submitted to friction, they exhibit electrical attraction. If a dry glass rod or a stick of sealing wax is rubbed upon a piece of silk, and then presented to light bodies, such as bits of paper or straw, these latter are attracted to the other body. With respect to the magnet, it is universally known that it possesses the property of attracting particles of iron or steel. Its undeviating tendency to turn to a certain point of the earth is also well known. No phenomenon of nature has been so often pressed into the service of poetry in the shape of a simile as this. What poet for the last two hundred years has not used it?

> "The obedient steel with living instinct moves,
> And veers forever to the pole it loves."—*Darwin.*

It is unnecessary to enter more particularly into these subjects at present.

SIR ISAAC NEWTON.

The most distinguished philosopher of modern times, was born on the 25th of Dec. 1642, in the manor-house of Woolsthorpe, a hamlet of Colterswórth, in Lincolnshire, England. The house stands in a pretty little hollow, on the west side of the valley of the river Witham, which rises at a short distance. This was the paternal estate of Newton,

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and here he was brought up and educated by his widowed mother. The following is a view of the house in which he was born.

"Every memorial of so great a man," says Dr. Brewster, in his Life of Newton, "has been preserved and cherished with peculiar veneration. His house at Woolsthorpe has been religiously protected by Mr. Turner of Stoke Rocheford, the proprietor. Dr. Stukeley, who visited it in Sir Isaac's lifetime on the 13th October 1721, gives the following description of it in his letter to Dr. Mead, written in 1727: ''T is built of stone, as is the way of the country hereabouts, and a reasonable good one. They led me up stairs and showed me Sir Isaac's study, where I suppose he studied when in the country in his younger days, or perhaps when he visited his mother from the university. I observed the shelves were of his own making, being pieces of deal boxes which probably he sent his books and clothes down in on those occasions. There were some years ago two or three hundred books in it of his father-in-law, Mr. Smith, which Sir Isaac gave to Dr. Newton of our town.

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"When the house was repaired in 1798, a tablet of white marble was put up by Mr. Turner in the room where Sir Isaac was born, with the following inscription:—

"'Sir Isaac Newton, son of John Newton, Lord of the Manor of Woolsthorpe, was born in this room on the 25th December, 1642.'

> Nature and Nature's laws lay hid in night,
> God said "Let Newton be," and all was Light.

"The house is now occupied by a person of the name of John Wollerton. It still contains the two dials made by Newton, but the styles of both are wanting. The celebrated apple tree, the fall of one of the apples of which is said to have turned the attention of Newton to the subject of gravity, was destroyed by wind about four years ago; but Mr. Turner has preserved it in the form of a chair.

"The modesty of Sir Isaac Newton, in reference to his great discoveries, was not founded on any indifference to the fame which they conferred, or upon any erroneous judgment of their importance to science. The whole of his life proves, that he knew his place as a philosopher, and was determined to assert and vindicate his rights. His modesty arose from the depth and extent of his knowledge, which showed him what a small portion of nature he had been able to examine, and how much remained to be explored in the same field in which he had himself labored. In the magnitude of the comparison he recognised his own littleness; and a short time before his death he uttered this memorable sentiment: 'I do not know what I may appear to the world; but to myself I seem to have been only like a boy playing on the seashore, and diverting myself in now and then finding a smoother pebble or a prettier shell than ordinary, whilst the

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great ocean of truth lay all undiscovered before me.'

"In the religious and moral character of our author there is much to admire and imitate. While he exhibited in his life and writings an ardent regard for the general interests of religion, he was at the same time a firm believer in Revelation. He was too deeply versed in the Scriptures, and too much imbued with their spirit, to judge harshly of other men who took different views of them from himself. He cherished the great principles of religious toleration, and never scrupled to express his abhorrence of persecution, even in its mildest form. Immorality and impiety he never permitted to pass unreproved; and when Dr. Halley ventured to say any thing disrespectful to religion, he invariably checked him and said, 'I have studied these things, —you have not.'"

Pronunciation.—The difficulty of applying rules to the pronunciation of our language may be illustrated in two lines, where the combination of the letters *ough*, is pronounced in no less than seven different ways, viz: as *o*, *eif*, *of*, *up*, *ow*, *oo*, and *ock*:—

Though the tough cough and hiccough plough me through,
O'er life's dark lough my course I still pursue.

It is computed that there are in the United States about 300 whale ships, employing about 1000 men, and which bring home every 30 months, about 227,960 barrels oil, the value of which is not far from $4,000,000. The outfit of each ship, for 30 months' cruise, is from 15,000 to 20,000 dollars.

A writer, M. De Candolle, has given the following ages of trees. Whether they are common or extraordinary we do not know:—Elm, 335 years; Cypress, 350; Ivy, 450; Larch, 575; Orange, 630; Olive, 700; Oriental plane, 720; Cedar of Lebanon, 800; Oaks, 810, 1080, 1500; Liine, 1076, 1148; Yew, 1214, 1458, 2588, 2880; Toxodium, 4000, 6000; Baobab, 5150. The last named tree is a native of Africa, and grows to the circumference of 60 feet.

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THE BASS ROCK.

"The fierce Dane,
Upon the eastern coast of Lothian landed,
Near to that place where the sea-rock immense,
Amazing Bass, looks o'er a fertile land."
Home's Douglas.

One of the first objects that strikes the eye of the traveller, after he has crossed the Scottish border by Berwick, is this remarkable rock in the sea, which lies at the mouth of the Frith of Forth, at the distance of about a mile and a half from the coast of East Lothian. It continues to be seen during the rest of the journey, until the traveller approaches Haddington, when the mountain called Berwick-law, and other high grounds, conceal it from view. It is about a mile in circumference, and not much more than four hundred feet above the level of the sea, but looks considerably higher. The water that washes its precipitous sides is from thirty to forty fathoms deep. The rock can be approached in safety only in fine weather; and its stark, rugged cliffs are only accessible by one narrow passage that faces the main land. Close by this only landing-place is a castle, now in ruins, but once a place of great strength and some importance in history, consisting of four square towers and connecting works. During the war of religion between Charles II., and the Covenanters this castle was converted into a state prison, and became the solitary residence of many west country Whigs and recusants. When the dynasty of the Stewarts was driven from the throne of the United Kingdom, the Bass Rock was occupied by a brave garrison devoted to that ill-fated family, who obstinately defended it for several years, and gained for the place the dubious honor of its being the last spot of

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British ground to yield to the improved and more constitutional government introduced by the revolution of 1688. Besides the castle there seems once to have been a hermitage and some other habitations on this rock; but soldiers, monks, prisoners, and peasants have all been long gone; and now the only inhabitants of the Bass are immense flocks of Solan geese and some score of sheep, that contrive to climb up its precipitous sides and find pasture on its summit.

The base of the rock is perforated completely through from east to west by a natural cavern fearfully dark in the centre, and through which the sea frequently dashes and roars with astounding violence, but which may be examined at low water on a calm day. When the tide is out, the water remaining in this curious fissure, at a few yards from its mouth, is not more than knee-deep. The young fishermen often go through it though its aspect is exceedingly terrific. At one of the entrances to this cavern it appears as if the Bass were composed of two immense rocks, the larger of which leans diagonally against the smaller, leaving this narrow chasm between them at the bottom, but closely joining with each other at all other points. There are several other caverns of considerable length, the openings into which resemble fretted Gothic windows or doors that have been made to deviate from the perpendicular by time or violence. The pencil of an able artist alone could convey an idea of their singularity and beauty.

The Bass is now the property of the family of the Dalrymples, of North Berwick, a little fishing-town on the coast, about three miles distant from

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the rock. It is of course more picturesque than profitable: about thirty pounds per annum are paid for the birds, and ten pounds for the right of pasturage. The island pays annually twelve Solan geese to the minister, and two to the schoolmaster of North Berwick, as part of their stipends. These geese, the principal inhabitants of the islet, are white birds, considerably smaller than the domesticated geese. They differ in many points from any other species of wild geese. They are birds of passage, and so very particular in the choice of their residence, that it is said, that of all the lonely rocks and islets of Scotland they are only found here and on Ailsa Craig, a rock in the Frith of Clyde, very like the Bass. They regularly arrive, year after year, at the end of February or beginning of March. At first a small flight is seen to wheel round the rock, and then alight on its precipitous sides with the most clamorous screams; these are soon followed by other flights, each more numerous than that which preceded it, and in a very few days after the arrival of the scouts and vanguard, the whole of the migratory colony is assembled, and no more stragglers are seen to arrive. They generally leave the Bass in parties, as they came, towards the end of October, though, occasionally, when the winter is mild and fish abundant in the surrounding sea, they forego their journey to distant parts of the world, and stay there the whole year round. Last winter, for instance, they did not leave the Bass.

They lay several eggs each, but only sit upon one, which they hatch on the face of the bare rock. Their season of incubation is in June and July, when the cliffs literally seem covered with their snow-white plumage.

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Their flesh has a strong fishy disagreeable flavor. A curious method is used by the fishermen in the neighborhood to catch them: they take a small wooden plank, which is sunk a little below the surface of the sea by means of a stone or a piece of lead; on this plank they put a herring, and then drag the plank after them by a long rope, which leaves the trap considerably astern of the boat. The bird, attracted by the sight of its favorite food, wheels two or three times in the air, and then plunges down with such rapidity, that it often transfixes the plank with its bill, and is almost invariably stunned or killed by the shock.

The plumage of the Solan geese, which is beautifully white and soft, is sold to upholsterers and others, who employ it in making feather-beds. The old man, who rents the rock, plucks the birds before they are sent to market. When deprived of their plumage they sell on an average at about seven-pence each. A good many of them find their way to the markets of Dunbar, Haddington, and Edinburgh, where many persons, who have been accustomed to it, do not find their flesh unpalatable, and use it at breakfast. The old man only takes the young birds, but sportsmen and others, who occasionally disregard his rights, shoot whatever comes in their way, though it is scarcely possible to eat the flesh of the old birds.

The writer of this short account, who has just returned from an excursion to the Bass, (May 9, 1833,) was much amused by the old fisherman's description of the mode of taking the young birds. It is precisely the same as that adopted in the Feroe Islands, Norway, and other rocky coasts. The geese hatch and bring up their young on the

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most precipitous sides of the rocks, where man has no possible means of access, except by being suspended from the head of the precipice. When this dangerous operation is to be performed, a party, never less than six men, climb up the Bass to some spot where there is firm footing, and which is immediately above a brood of the geese, which always lie in large flocks crowded together. The man who is to descend is secured by a strong rope tied round his body, and a second rope, with a leaden weight at its end, is dropped down by his side within reach of his hand. Both these ropes are kept fast by the men on the top of the rock, who gradually lower their companion down the sides of the perpendicular cliff. The man, in his descent, aids himself, or rests himself occasionally, by putting his toes in the crannies or on slight projections of the rock. The second rope, which serves to steady him, he grasps with his left hand, and in his right hand he carries a strong stick to knock down the young birds, and keep off the old ones, whose bite is exceedingly severe. As soon as he reaches the point where the brood lies, he proceeds with all expedition to knock them on the head, on which they fall from the narrow ledge where they were sitting, and drop into the sea at the foot of the rock, where they are taken up by men in boats. Great havoc is thus made on the poor birds in a very few seconds, and when their destroyer has disposed of all he can reach, he is pulled up to the top of the rock.

The eastern side of the Bass is most frequented by the Solan geese. As the writer approached, on the morning of the ninth May, an almost incredible number of geese flew thence, looking like snow blown from a mountain's side. Their

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united scream, which is peculiarly wild and shrill, seemed to reproach his intrusion as they wheeled over his head. In going round the rock, the geese flew out in great numbers in many other places, and besides them morrits or puffens, and tommy-norics or hawks, darted from the side of the cliffs in countless numbers.

When the writer reached the landing-place, he found some men in a large boat with twenty-two sheep that were brought to the Bass for pasture. The first part of the ascent, which lay over steep slippery rocks, was not performed without some difficulty either by the sheep or the men. On the top of the rock, however, the poor sheep found excellent grass. They were to be left here until October or November, when the shepherd said, it was sure they would be found fat and in the finest condition. A variety of beautiful wild flowers, in full bloom, sprung up among the pasture and from fissures in the rocks

Many of the geese had already laid their eggs and were sitting on them. On the side of a cliff above the castle—the only place where the traveller could get at all near to them—about a hundred that were thus occupied, allowed him to approach almost within reach of them before they would leave their eggs. They then rose on the wing, uttering their wildest screams, and hovered over their eggs until the intruder departed, when they instantly returned to their positions. The eggs lay on the bare rock without any thing to protect them. Unlike the tame goose, these birds had a very bold and fierce appearance.

On the shore of the main land, immediately opposite to the Bass Castle, stand the striking ruins of Tantallan Castle, which form one of the finest

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features in the view, that is, on all sides, varied and picturesque, and crowded with historical associations.

HAIL.

Hail is unquestionably formed by the congelation of vapor in the higher regions of the atmosphere; and this arises from the warmer air in which the vapor was suspended mixing suddenly with an intensely cold current of air. Hail is generally defined to be frozen rain; but it differs from ice in this, that the hailstones are not formed of single pieces of ice, but of small particles agglutinated together, some of which are very hard, like perfect ice, while others are soft as snow, or resemble snow that has been hardened by frost. When hailstones are broken open, or cut across, they are sometimes within found to be of a spongy structure; sometimes the interior presents a very beautiful radiated appearance, and not unfrequently exhibits regular and very remarkable concentric plates. Generally, the centre of the hailstone is harder than its surface, and occasionally presents us with a nucleus, or sort of core, imbedded in which, bits of straw, wood, and earth, have been found; substances which, it may be presumed, were elevated from the surface of the earth by the action of a whirlwind, or some similar meteor. Hailstones vary much in shape: they are generally oval or round, but sometimes thin, flat, irregular globular, angular, pyramidal, occasionally irregular, having a central point whence proceed numerous icy spiculæ, like rays in all directions; and, also, although more rarely, they have appeared as six sided prisms. A few years ago, a tremendous storm occurred in Gloucester-

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shire, the most remarkable circumstance attending which, was the hail shower by which it was accompanied. "It may be doubted," says the Athenæum, "whether such a name as hail be applicable, for the masses of ice which fell in places where the storm most fiercely raged, bore no resemblance to hailstones in magnitude or formation, most of them being of a very irregular shape, broad, flat, and ragged, and many measuring nine inches in circumference; they appeared like fragments of a vast plate of ice broken into small masses by its descent towards the earth." On the 4th of June, in the year 1814, hail fell at Cincinnati, Ohio, the pieces of which are described in the account read to the Literary and Philosophical Society of New York, as having been apparently "aggregated of numerous others, which were likewise composed of smaller ones, while some of more than ordinary size appeared single, as if they had been snowballs immersed in water, and refrozen."

Hailstones vary considerably in size—from that of a nullet seed to that of a pigeon's egg—the smaller generally falling in the more northern climates, the larger in the south of Europe. Hailstones have fallen in Scotland which have been found to weigh five ounces; in North America they have been picked up weighing fifteen ounces; and in Oct. 5, 1831, one fell at Constantinople which weighed more than a pound. "I had long refused," observes Volney, in his View of the Climate &c. of America, "to credit the existence of those hailstones said to weigh ounces, and even pounds, of which newspapers and travellers too frequently speak. But the storm of the 13th of July 1788 affords me the conviction of my own senses. I was at Ponchartrain, ten miles from Versailles; and

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going to see a sheep-walk at six o'clock in the morning, I found the rays of the sun intolerably scorching; the air was calm and suffocating, that is, it was extremely rarefied; the sky was without a cloud, yet I heard four or five claps of thunder. About a quarter after seven, a cloud appeared in the southwest, and then a very brisk wind arose. In a few minutes, the cloud filled the horizon, and speeded toward the zenith with an increase of the wind; and a hail storm suddenly came on, the stones not falling perpendicularly, but at an angle of forty-five degrees, and so large that you would have taken them for the pieces of mortar of a roof fallen down. I could not believe my own eyes; many of the stones were larger than a man's fist, and I observed, too, that several of these were only fragments of larger pieces. When I could safely venture my hand out of the door of the house to which I had very opportunely retired for shelter, I took up one, and found it to weigh more than five ounces by a common pair of scales. Its shape was very irregular, and it had three principal horns as big as the thumb, and almost as long, projecting from the nucleus, on which they were collected. I have been credibly informed that a hailstone at St. Germaine's weighed more than three pounds, and after this I know not what surpasses belief."

It is related, that, during the wars of Louis the Twelfth in Italy, in 1510, there was for some time a horrible darkness, after which the clouds broke into thunder and lightning, and there fell hailstones of one hundred pounds weight. On the 19th of May 1809, a severe hail-storm occurred in the neighborhood of London. The hailstones that fell were many of them a full inch in diameter. Such was the velocity with which they were precipitated,

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that in many instances a clear round hole was left in the glass they pierced. "The water of the river, (says the account,) lashed by the hail and raised by the wind, resembled a caldron boiling violently, rather than waves with breakers. The damage done was so great, that a London newspaper estimated it at 200,000 squares of glass broken in sashes, skylights, conservatories, oratories, hothouses, &c., besides the injury done to the crops in fields and gardens. The foliage of large elms was cut off, and scattered on the ground to a furlong's distance to leeward; and fruit trees, besides being thus stripped, received wounds in their bark which were visible long after."

It is calculated that a single drop of water, the diameter of which is only the one-thousandth of an inch, will, in descending through the air, acquire a velocity of nine or ten feet every second; wherefore it is less surprising that hailstones of such magnitude and weight should occasionally prove destructive, not only to delicate plants, but even to animals; for a pebble, even of the ordinary size of a hailstone, were it to fall from the mouth of a well on the head of a man, would kill him; and meteoric stones, which are no larger, bury themselves deep in the ground, and have been known even to force themselves through the body of a house, and penetrate some inches into the cellar ground.

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CARISBROOK CASTLE.

There are few edifices now remaining in England that lay claim to so venerable an antiquity as the celebrated pile of which we are about to give an account. Carisbrook Castle stands about a mile to the southwest of Newport, the principal town of the Isle of Wight, and consequently almost in the centre of the island. It is erected upon an eminence, from which it overlooks the town of Carisbrook, now an insignificant village, but which, before Newport rose into importance, enjoyed the dignity of metropolis of the Isle of Wight under the feudal lords who possessed the island until 1291.

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It is thought by some antiquaries that a portion of the present building was of Saxon construction, as early as the sixth century. After the Norman invasion the castle was greatly enlarged by William Fitzosborne, Earl of Hereford, to whom it was given by the Conqueror, and additions have since been repeatedly made to it. In the reign of Elizabeth, the buildings were for the first time enclosed by a wall faced with stone, and defended by a deep moat, as they now remain. The space contained within this enclosure amounts to about twenty acres, and the entire circuit of the fortifications is three-fourths of a mile.

The principal and most ancient part of the castle, however, is that which stands on the west side, next to the entrance, and forms an almost regular parallelogram, with the corners rounded off. Much of this belongs undoubtedly to the Norman age, and a small portion of it is probably Saxon. The Keep is built on the north side of the fortress upon the summit of an artificial mount, of nearly sixty feet in height, the ascent to which is by a flight of seventy-two steps. Only the lower apartment now remains, which is an irregular polygon, of about sixty feet broad in the widest part. Over this there appears to have been originally, at least one other story, of which however nothing now remains. The prospect from the top is of great beauty and extent, comprehending not only the whole of the island, but a considerable part of Southampton water, and of some of the adjoining counties. In the centre of the Keep is a well of three hundred feet in depth, but which has been for some time covered over as useless and dangerous. In ancient times such an accommodation must have been indispensable in this the heart of the fortress, and the last retreat of the garrison when pressed by a

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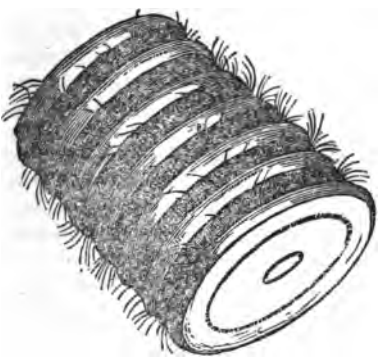
besieging enemy. In the earlier ages of English history Carisbrook Castle was frequently attacked, especially by the French. In 1377 it is related, that a band of invaders of that nation having made an assault upon it, fell into an ambuscade in a narrow lane in the neighborhood, and were nearly all massacred. The scene of slaughter still retains the name of Deadman's-lane.



Stem of the Sago Tree, showing the pith from which the Sago is extracted.

SAGO.

The substance known in commerce under the name of sago is a farinaceous pithy matter, extracted from the trunk of a tree.

This tree is a native of the southeast of Asia, and of the islands of the Indian Ocean, where it grows spontaneously, and is perfected without any culture. This circumstance occurring with regard to a substance highly nutritive, in a climate which disposes the human frame to inaction, occasions the adop-

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tion of sago in many places as the general food of the population, to the neglect of other plants, the cultivation of which would call for some amount of exertion.

The sago, or, as it is called in the Molucca Islands, the libley tree, is of peculiar growth. The trunk, which is formed of the bases of the leaves, grows at first very slowly, and is covered with thorns; so soon, however, as the stem is once formed, the growth of the tree proceeds with very great rapidity, so that it speedily attains its full height of thirty feet, with a girth of five or six feet, losing in this stage its thorny accompaniments. Like the cocoa-nut tree, the sago has no distinct bark that can be peeled off, but the trunk consists of a long, hard, ligneous tube, about two inches thick, the internal area of which is filled with a kind of farinaceous pith, intermixed with numerous longitudinal fibres. The maturity of the tree is known by the transpiration of a kind of whitish dust through the pores of the leaves, and when this appears the trunk is felled near to the ground.

The best account of this tree, and of the mode of preparing its pith for use as human food, is to be seen in Forrest's account of the Molucca Islands: it is to the following effect.

"The tree being felled, is cut into lengths of five or six feet. A part of the hard wood is then sliced off, and the workman, coming to the pith, cuts across the longitudinal fibres and the pith together, leaving a part at each end uncut, so that when it is excavated, there remains a trough, into which the pulp is again put, mixed with water, and beaten with a piece of wood. Then the fibres, separated from the pulp, float at top, and the flour subsides. After being cleared in this manner by several

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waters, the pulp is put into cylindrical baskets made of the leaves of the tree; and if it is to be kept some time, those baskets are generally sunk in fresh water to keep it moist. One tree will pro duce from two to four hundred weight of flour.

"We seldom or never see sago in this country but in a granulated state. To bring it into this state from the flour, it must be first moistened and passed through a sieve into an iron pot (very shallow) held over a fire, which enables it to assume a globular form. Thus all our grained sago is half baked and will keep long. The pulp or powder of which this is made will also keep long if preserved from the air, but if exposed, it presently turns sour."

We learn also from the same authority, that loaves of bread are sometimes made in the Molucca Islands of the pith of the sago, and that these loaves are baked in small ovens, "the floors of which are divided by means of partitions into cells about the size of an octavo volume."

The leaf of the sago is used in the same quarter for covering houses, and in that climate will not need to be renewed oftener than once in seven years.

When the sago tree is cut down, its vegetative power still remains in the root, which again puts forth its leaves and forms the trunk, and this proceeds again through its different stages until it is again subjected to the axe, and made to yield its alimentary contents for the service of man.

Sago is also produced from many varieties of palms, but the tree here described is that which furnishes the best. The produce of the *Cycas circinalis*, so often erroneously mentioned as yielding the sago of commerce, is very inferior.

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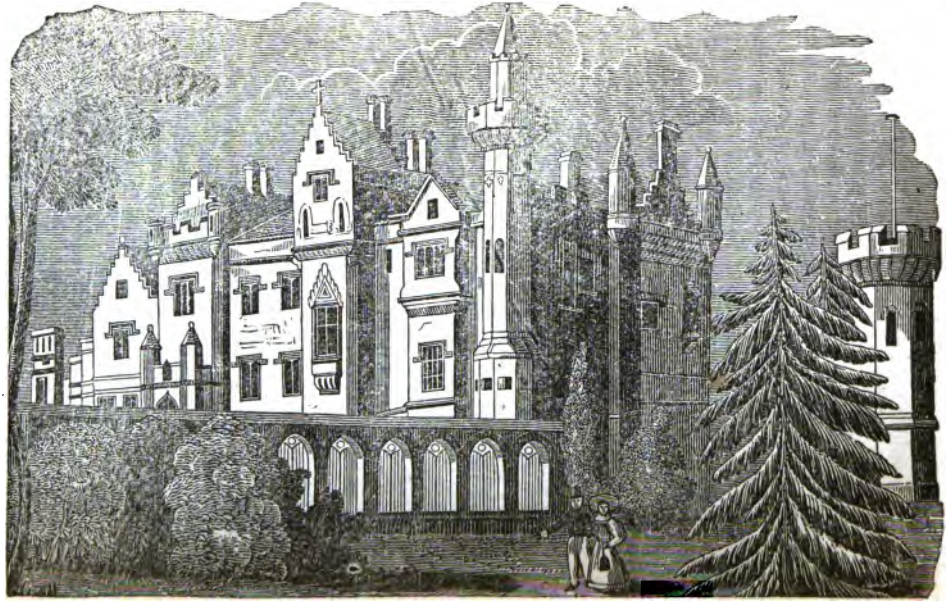

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ABBOTSFORD.

Abbotsford the seat of the late Sir Walter Scott, is beautifully situated on the south bank of the Tweed, about half a mile from the junction of the Ettrick with that river, and a few miles above Melrose Abbey. The surrounding country is celebrated in the annals of romantic lore: in the distance are the Eildon Hills, and the Huntly Burn rushes through a deep ravine in the grounds. The mansion takes its name from a ford formerly used by the monks of Melrose; it is built of a fine gray granite, after designs by Atkinson; the style is not indeed referable to any peculiar age, for in it are concentrated an endless variety of forms and ornaments, borrowed from the most celebrated buildings and ruins of Scotland; thus there is a gateway from Linlithgow, the stone-work and the door of the old Tolbooth of Edinburgh, a chimney-piece from Melrose Abbey, a postern from the Heart of Mid-Lothian, &c. &c. From the exterior, the mansion presents a singularly arranged combination of towers, posterns, zig-zag gables, parapets, and machicolated eaves, with grotesque water-spouts, groups of Elizabethian chimneys, and many other adornments.

From the Gateway, (the fac-simile of that at Linlithgow,) entrance is directly obtained to the Hall, lighted by two lofty gothic windows filled with stained glass and coats of arms. The walls are of richly carved oak, chiefly brought from the old palace of Dumfermline; and the roof is a series of

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pointed arches of the same material, the ends of the beams of which, with the exception of two or three, present in the centre, according to the fashion of the middle ages, the arms of the illustrious inhabitants richly blazoned. Around the cornice of the hall runs a continued series of accurately blazoned shields of the heroes of the Border, among which the Scots, the Kerrs, the Douglas', the Herries', and the Rutherfords, are distinguished; two suits of complete steel armor occupy niches: and around are arranged multitudes of swords, spears, helmets, cuirasses, &c., from the enormous two-handed "Schwert," of the Swiss peasant, to the rapier of Dettingen; and from the goodly lance of the steel-clad knight, to that of the Pole who fell at Waterloo. In a room adjoining the hall, are arranged the smaller pieces of offensive and defensive weapons, as spears, darts, arrows, harquebusses, daggers, and pistols, besides various relics of illustrious personages, among which not the least in importance are Rob Roy's gun, the hunting flask of bonnie King James, and Buonaparte's pistols.

The next room of importance is the Library, which is admirably fitted up; the roof and bookcase are of oak, carved to correspond. Two cases opposite the fireplace contain the most valuable of the books and MSS. relative to the rebellions of 1715 and 1745; another case, in the bay window which overlooks the Tweed, those on Magic. The library boasts presentation copies of many distinguished living authors, and a magnificent set of Montfaucon, in ten volumes, folio, a present from George IV. In the same room, on a rich stand of porphyry, is placed a tall silver urn, filled with ashes, and bearing the inscription: "*Given, by George Gordon, Lord Byron, to Sir Walter Scott,*

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Bart ;" it formerly contained the letter sent with the gift.

Joining the Library is the Study; it is a small room filled with books and objects of antiquity; a writing table in the centre, and a plain armed-chair covered with black leather, form the only furniture of this room, now no longer to be used by its originally illustrious proprietor. The view from the bay window of the principal library, is singularly picturesque; beyond a lawn of green turf rolls the Tweed, fringed with the willow and beach, and in the distance rise the green hills of Ettrick.

In the very accurate and well written Gazetteer of Scotland, edited by Messrs. Robert and William Chambers, it is stated, that the house and its woods have been entirely the creation of the late illustrious proprietor, and that the name is altogether new; as the previous title of the place, when covered by a small and mean farmstead, was Cartley Hole.

It was here that, on the 21st of September, 1832, at half-past one in the afternoon, the poet closed his eyes upon this world. It had been his lasting desire to end his days in his native land, and the wish was fulfilled.

On the 29th of October, a meeting of the creditors of the late Sir Walter was held at Edinburgh, at which the mansion and grounds adjoining were for the present secured to the family; and on the 9th of November, a meeting was held in London, for the purpose of devising means to preserve Abbotsford, as the best monument of the genius of Sir Walter, at which it was agreed:

"That a subscription be forthwith entered into for the purpose of not only preserving Abbotsford, but of securing its proper maintenance in the family

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of Sir Walter Scott; that books be prepared for the collection of subscriptions, and sent not only throughout the British dominions, but into every part of the world where one of the books can be lodged; that the books be so prepared as to admit the name, description, &c. of the subscriber; that they be all of one uniform size; and that, when the subscription shall be closed, the said books be gathered together, bound up, and deposited among the most honorable of the archives of Abbotsford."

A spirited subscription is now in progress in the neighborhood of Melrose and Abbotsford, for the purpose of erecting a monument to the memory of Sir Walter Scott. It is proposed to build the monument on the top of the Eildon Hills. From the conical peak, 1,330 feet above the level of the sea, one of the most picturesque and commanding in the South of Scotland, it will be seen from thirteen counties. The following cut represents another view of Abbotsford.

The following spirited "Farewell to Abbotsford," by Mrs. Hemans, written before the "home

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of the Legend and the Lay," was deprived of its lord and master, possess a melancholy interest at this time.

Home of the gifted! fare-thee-well,
And a blessing on thee rest;
While the heather waves its purple bell
O'er moss and mountain crest;
While stream to stream around thee calls,
And banks with broom are drest,
Glad be the harping in thy halls—
A blessing on thee rest.

While the high voice, from thee sent forth,
Bids rock and cairn reply,
Wakening the spirits of the North,
Like a chieftain's gathering cry;
While its deep master-tones hold sway,
As a king's o'er every breast,
Home of the Legend and the Lay!
A blessing on thee rest.

Joy to thy hearth, and board, and bower!
Long honors to thy line!
And hearts of proof, and hands of power,
And bright names worthy thine!
By the merry step of childhood still
May thy free sward be prest!
While one proud pulse in the land can thrill,
A blessing on thee rest.

ATTRACTION.

We shall now turn to the other grand division of the subject, namely, the attraction exercised between particles of matter situated at short or insensible distances from each other. Cohesive attraction is that power which retains atoms of the same kind together in masses. When two drops of the same

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sort of liquid are placed near to each other, as was remarked at the commencement, they attract each other, and uniting together, form one globule. The roundness of the drop is caused by this attraction.

"Hast thou not seen two pearls of dew
The rose's velvet leaf adorn—
How eager their attraction grew,
As nearer to each other borne?"—*Drummond.*

If two globules of quicksilver on a smooth surface be brought near to each other, they will unite in a similar manner. They have also a tendency to remain in this state, and will not separate until some force be applied. Cohesion is strongest in solids. For instance, a bar of iron of half an inch in diameter, or even less, will defy all our efforts to break it with the hand. In fluids, the power is a great deal weaker, as is proved by the ease with which we can separate one portion of water from another. Small needles, however, can be made to float on water, their weight not being sufficient to overcome the cohesion of the fluid. In the same way many small insects walk on the surface of water without being wetted. In gaseous bodies, such as air, this attraction is entirely overcome, and a mutual repulsion exists among the particles, which is the cause of their elasticity. Cohesion is illustrated by the following facts:—When portions of the same size are cut from two leaden bullets, and the fresh surfaces being brought into contact, and slightly pressed, they will unite, and appear as if they had been originally cast in one piece. Fresh cut surfaces of India-rubber cohere in a similar manner. There is a species of attraction called *adhesive* attraction, instances of which come frequently under observation. If water be poured

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from a jug which has not a projecting lip, it will not fall perpendicularly, but run down the outside of the vessel. Hence the reason of having a spout to such utensils. A plate of glass, when brought into contact with a level surface of water, adheres to it with considerable tenacity, and resists a separation. Pieces of wood floating in a pond attract each other, and remain in contact; and the wrecks of vessels, when the sea is smooth, are often found gathered together in heaps.

There is a species of attraction called *capillary*, which takes place under the following circumstances:—When one end of an open glass tube is put into water, the enclosed liquid stands above the level of that on the outside, and it rises always the higher the smaller the bore of the tube is; the surrounding glass, being thus nearer to the water, attracts it more powerfully. A piece of lump sugar, whose lowest corner touches the water, soon becomes moistened throughout. Thus also the wick of a lamp or candle draws up the oil or tallow to supply combustion. The sap which rises from the roots to the tops of vegetables, though chiefly an action of vegetable life, partly depends on capillary attraction for its ascent.

We come now to a most important and interesting part of the subject, namely, *chymical attraction* or *affinity*.

There are in nature about fifty-four substances, which are termed elements, from the impossibility of human skill or industry to reduce them to any thing simpler. These elements, uniting together by the power of chymical attraction, form the infinite variety of objects around us. The investigation of this subject, from its great extent and vast importance, would require a separate article of

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itself to do it any thing like justice; but we hope to be able to give a general idea of it, sufficiently *attractive* to induce the reader to pursue the subject in more laborious compilations.

Chymical attraction is exercised between particles of dissimilar bodies, which, uniting, form a new substance possessing properties different from those of its ingredients. Frequently, indeed, the qualities of the compound are exactly the opposite of those of its constituents, as in the case of water. This liquid is composed of hydrogen, one of the most inflammable bodies known, and oxygen, the grand supporter of combustion on the globe. Yet when these are united, they form a fluid possessing qualities so totally different from their own, that it destroys all flame whatsoever, unless, indeed, the heat be so intense as to decompose the water; and frequently the same component parts, when united in different proportions, produce the most opposite substances. Thus the common air which we breathe is composed of the very same elements as aquafortis. All bodies have not a chymical attraction for each other. Thus oil and water, though shaken together, will never be made to unite; but if lime water is employed, a union takes place, and the result is a new compound, which is insoluble in water. Again, sulphuric acid, or vitriol, will not dissolve or unite with gold; but it will with copper or iron, (besides a great variety of other bodies,) forming in the first instance sulphate of copper or blue vitriol; and in the second, sulphate of iron or copperas. Common sea sand and soda, when heated together, attract each other, and, combining, form glass. What are called acids and alkalies have a strong affinity for each other, and their compounds form a class of substances called salts,

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which are most important in the arts and manufactures. Oil of vitriol and soda, for instance, combine with great facility, and the compound is Glauber salt.

Thus, by the existence and exercise of this peculiar property of matter, are formed the endless diversity of substances which constitute the mass of our globe. It is impossible to contemplate the subject of attraction in general, without a feeling of religious reverence and awe for the Divine Being who drew the mighty plan, set it in motion at first, and sustains it so still. But the wisdom of it is not more conspicuous than the benevolence. Indeed, the operations of all the various laws of nature are to man so many various sources of enjoyment. He stands as it were the centre of the system of life and nature around him. What attraction is in the abstract, human sagacity has not yet, and probably never will, unravel.

The chain of cause and effect here breaks off, or rather for the present may be said to terminate in the Deity. Future philosophers, however, may discover a proximate cause, and even trace the golden links through a thousand beautiful windings, but in a Divine Creator they must merge at last.

AIR AND EXERCISE.

There is a fact well known to physicians, which settles at once the importance of fresh air to beauty, as well as health. It is, that in proportion as people stay at home, and do not set their lungs playing as they ought, the blood becomes dark, and lags in its current; whereas the habit of inhaling the air out of doors reddens it like a ruby, and

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makes it clear and brisk. Now the darker the blood, the more melancholy the sensations, and the worse the complexion.

It is common with persons who inherit a good stock of health from their ancestors, to argue that they take no particular pains to preserve it, and yet are well. This may be true; and it is also true, that there is a pains-taking to that effect, which is superfluous and morbid, and helps to do more harm than good. But it does not follow from either of these truths, that a neglect of the rational means of retaining health will ultimately be good for any body. Healthy people may live a good while upon their stock. Children are in the habit of doing it. But healthy children, especially those who are foolishly treated upon an assumption that health consists in being highly fed, and having great beef-eaten cheeks, very often turn out sickly at last; and grown-up people, for the most part, at least in great towns, have as little really good health, as children in general are given credit for the reverse. Nature does indeed provide liberally for abuses, but the abuse will be felt at last. It is generally felt a long while before it is acknowledged. Then comes age, with all its train of regrets and superstitions; and the beauty and the man, besides a world perhaps of idle remorse, which they would not feel but for their perverted blood, could eat their hearts out for having been such fools as not to secure a continuance of good looks and manly feelings, for want of a little handsome energy.

The ill taste of existence that is so apt to come upon people in middle life, is too often attributed to moral causes. Moral they are, but very often not in the sense imagined. Whatever causes be mixed up with them, the greatest of all is, in ninety-

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nine instances out of a hundred, no better or grander than a non-performance of the common duties of health. Many a fine lady takes a surfeit for a tender distress; and many a real sufferer who is haunted by a regret, or takes himself for the most ill-used of bilious old gentlemen, might trace the loftiest of his woes to no better origin than a series of ham-pies, or a want of proper use of his boots and umbrella.

THE TRUMPETER BIRD.

This bird is a native of South America. Its

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length is about twenty-two inches, and its legs are five inches high, and completely covered with small scales, which reach two inches above the knee. Its general plumage is black, and the feathers of the head and neck are very short and downy; those of the fore part of the neck, and upper part of the breast, of a very glossy gilded green, with a reflection of blue in some lights. The feathers between the shoulders are rust-colored, changing into a pale ash color as they pass downwards. They are loose and silky. Those of the shoulders are long, and hang over the tail, which is very short, and consists of twelve blackish feathers. The legs are greenish, and the bill is yellowish green, having the nostrils open.

The most characteristic and remarkable property of these birds consists in the wonderful noise which they often make, either of their own accord, or when urged by their keepers. To induce them to this, it is sometimes necessary to entice the bird with a bit of bread to come near, and then making the same kind of sound, which the keepers can well imitate, the bird will frequently be disposed to repeat it. This strange noise, which somewhat resembles the moan of pigeons, is at times preceded by a savage cry, interrupted by a sound approaching that of *sherch, sherch.* In this way the bird utters five, six, or seven times, very quickly, a hollow noise from within its body, nearly as if one pronounced *tou, tou, tou, tou, tou, tou,* with the mouth shut, resting upon the last *tou* a very long time, and terminating by sinking gradually with the same note.

When tamed, the Trumpeter distinguishes its master and benefactor with marks of affection. "Having," (says Vosmaër) "reared one myself,

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I had an opportunity of experiencing this. When I opened its cage in the morning, the kind animal hopped round me, expanding its wings, and trumpeting, as if to wish me good morning. He showed equal attention when I went out and returned. No sooner did he perceive me at a distance, than he ran to meet me; and even when I happened to be in a boat, and set my foot on shore, he welcomed me with the same compliments, which he reserved for me alone, and never bestowed upon others."

The Trumpeter is easily tamed, and always becomes attached to its benefactor. When bred up in the house, it loads its master with caresses, and follows his motions; and if it conceives a dislike to persons on account of their forbidding figure, or of some injury received, it will pursue them sometimes to a considerable distance, biting their legs, and showing every mark of displeasure. It obeys the voice of its master, and even answers the call of others to whom it bears no ill-will. It is fond of carèsses, and offers its head and neck to be stroked; and if once accustomed to these familiarities, it becomes troublesome, and will not be satisfied without continual fondling. It make its appearance as often as its master sits down to table, and begins with driving out the dogs and cats from the room; for it is so obstinate and bold, that it never yields, but oftentimes after a tough battle, will put a middle-sized dog to flight. It avoids the bites of its antagonist by rising in the air; and retaliates with violent blows of its bill and claws, aimed chiefly at the eyes. After it gains the superiority, it pursues the victory with the utmost rancor, and if not taken off will destroy its antagonist. By its intercourse with man, its instincts become moulded like those of a dog; and we are assured it can be

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trained to attend a flock of sheep. It even shows a degree of jealousy of its human rivals; for when at table, it bites fiercely the naked legs of the negroes and other domestics who approach its master.

Almost all these birds have also a habit of following people through the streets, and out of town, even those whom they have never seen before. It is difficult to get rid of them. If a person enters a house, they will wait his return, and again join him, though after an interval of three hours. "I have sometimes," (says M. de la Borde) "betaken myself to my heels; but they ran faster, and always got before me; and when I stopped, they stopped also. I know one that invariably follows all the strangers who enter its master's house, accompanies them into the garden, takes as many turns there as they do, and attends them back again."

In a state of nature the Trumpeter inhabits the barren mountains and upland forests of South America, never visiting the cleared grounds nor the settlements. It associates in numerous flocks. It walks and runs, rather than flies, since it never rises more than a few feet from the ground, and then only to reach some short distance, or to gain some low branch. It feeds on wild fruits; and when surprised in its haunts, makes its escape by the swiftness of its feet, at the same time uttering a shrill cry, not unlike that of a turkey.

The various combinations into which the twenty-four letters of the alphabet may be arranged, amount to 620,448,401,733,239,439,360,000.

The number of miles run by Stage Coaches in England is annually about 40,530,000. The expense of drawing coaches by horses is about two shillings per mile, so that the annual expenditure for horse-keeping is about 4,000,000*l*.

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GROUP FROM BURNS'S TAM O'SHANTER.

We have the pleasure of presenting to our readers a wood engraving of the four statues illustrative of Burns's tale of Tam O'Shanter, which are now exhibiting in this city at Harding's Gallery in School Street. The drawing is by Johnson, and has been pronounced by the proprietor of the figures, the best representation of them that has yet been published. The eager, happy air of Tam, who is breathing "soft whispers" in the ear of the landlady, whilst his uplifted tankard is totally disregarded, and her own mute, delighted attention, are admirably expressed. The position of her arms and feet, however, evidently betokens, that she is momentarily expecting the call of a customer, and the very situation of the bar is at once imagined by the spectator.

The Souter (Cobbler) exhibits in his quiet contentment, the calm satisfaction of one, who drinks at another's expense, who has the wit to please, and the tact to use it rightly. He is amusing the landlord, so that Tam may pursue his object without interruption. His overflowing humor seems to have completely subdued his companion, whose muscular organs are relaxed, his head thrown back, and even his laugh the laugh of exhaustion.

Though Johnson's design conveys much of the spirit of the original, it is necessarily imperfect. Our readers should see the statues themselves to

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form an idea of the skill and genius employed in their execution. Reminding them that the merry group will not continue in this city long, we hasten to make the following extract from an Edinburgh journal, which was written by "a gentleman who has made sculpture and painting his particular study for many years," and which will, we believe, prove interesting to the public.

'James Thom, the sculptor of these wonderful figures, is a native of Ayrshire, and of respectable parentage near Tarbolton. Although, like those of his countryman and inspirer, his relatives were all engaged in agricultural pursuits, (his brothers, we understand, possess large farms,) the young man himself preferred the occupation of a mason, and was, accordingly, apprenticed to a craftsman in Kilmarnock. This profession was probably selected as offering the nearest approach to the undefined workings and predilections of his own inexperienced mind, since he was not, as in the instance of several sculptors of eminence, thrown first into the trade of a stone mason by the force of circumstances. This would appear from his showing little attachment to the drudgery of the art: accordingly, his first master is understood to have pronounced him rather a dull apprentice. From the beginning, he seems to have looked forward to the ornamental part of his calling; and in a country town where there was little or no opportunity of employment in that line, to those more immediately concerned, he might appear less useful than a less aspiring workman. The evidences of young Thom's diligence and talent at this time, however, still remain in numerous specimens of carving in stone, which he himself still considers, we are told, as superior to any thing he has yet done.

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His term of apprenticeship being expired, Mr. Thom repaired to Glasgow in pursuit of better employment. Here his merits were immediately perceived, and so well rewarded, that his wages were considerably higher than the ordinary rate.

In his present profession, Mr. Thom's career may be dated from the commencement of the winter of 1327. Being employed at this time in the immediate neighborhood, he applied to Mr. Auld, of Ayr, who afterwards proved his steady and judicious friend, for permission to take a sketch from a portrait of Burns, with the intention of executing a bust of the poet. This is a good copy of the original picture by Mr. Nasmyth, and is suspended in the very elegant and classical monument, from a design by Mr. Hamilton, erected to the memory of the bard, on the banks of the Doon, near "Alloway's auld haunted kirk." The permission was kindly granted; doubts, however, being at the same time expressed, how far the attempt was likely to prove successful, Mr. Thom not being then known in Ayr. These doubts seemed to be confirmed, on the latter returning with a very imperfect sketch, taken by placing transparent paper on the picture. These occurrences happened on the Wednesday, consequently nothing could be done till Thursday, when materials were to be procured, and other arrangements made, before the work was absolutely begun. The surprise then may be conceived, on the artist returning on the Monday following with the finished bust. In this work, though somewhat defective as a likeness, the execution, the mechanical details, and the general effect, were wonderful, especially when viewed in connexion with the shortness of the time, and the disadvantage of being finished almost from memory

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—the very imperfect outline, already mentioned, being the only *external* guide. It was this general excellence that encouraged the proposal of a full length figure—a proposal to which the artist gave his ready assent, stating that he had wished to undertake something of the kind, but did not consider it prudent, without any prospect of remuneration, to hazard the expense both of the block of stone and the loss of time. On this Mr. Auld offered to procure any stone from the neighboring quarries which the artist might judge fit for his purpose. Several days elapsed in this search; in the meantime, the matter was rather laughed at than encouraged; and some apprehensions of failure, and exposure to consequent comments, being expressed, "Perhaps," said the artist, endeavoring to reassure his friends, "I had just better try my *hand* at a *head*, as a specimen o' Tam." This being agreed to, he returned to Crosby churchyard, where he was then employed upon a gravestone. The day following happened to be one of continued rain; and, finding that the water filled up his lines; probably, too, thinking more on "glorious Tam," than on the *memento mori* he was attempting to engrave, our artist resolved to take time by the forelock, and to set about the "specimen head" directly. Accordingly, pulling from the ruins of the church of Crosby a rabat of the doorway, as a proper material for his purpose, he sat himself down among the long rank grass covering the graves, and in that situation actually finished the head before rising. Nay, more, although the day has been described to us "as a dounright pour," so total was his absorption in the work—so complete his insensibility to every thing else, that he declares himself to have been unconscious of

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the "rattling showers," from the moment he commenced. Such is the power of genuine and natural enthusiasm in a favorite pursuit. This head, which contained, perhaps, more expression than that even of the present figure, decided the matter. Next day, the block requisite for a full-length of Tam o' Shanter, was brought into Ayr, a load for four stout horses, and placed in a proper workshop, within Cromwell's fort.

It may be interesting to mention a few particulars of the manner in which these figures have been composed and finished. "Tam" was selected by the artist as a subject for his chisel. The figure is understood to bear a strong traditional resemblance to the well-known Douglass Graham, some forty years ago a renowned specimen of a Carrick farmer, and who, residing at Shanter, furnished to Burns the prototype of his hero.

—— Souter Johnnie,
His antient, trusty, drouthie cronie—

is said to be a striking likeness of a living wight—a cobbler near Maybole; not that this individual sat for his portraiture, but that the artist appears to have wrought from the reminiscences of two interviews with which he was favored, after twice travelling "some lang Scotch miles," in order to persuade the said "souter" to transfer his body, by means of his pair of soles, from his own to the artist's studio. The bribe of two guineas a-week, exclusive of "half-mutchkins withouten score," proved, however, unavailing, and the cobbler remained firm to the *last*. By this refusal, "the birkie" has only become poorer by the said couple of guineas, and certain half-mutckins drouthier," for so true has the eye of the sculptor proved, that

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every one is said instantly to recognise the cobbler's phiz and person. A strange perverseness, indeed, or fatality, or what you will, seems to have seized upon all the favored few selected as fitting archetypes for these admirable figures. For, Tam's "nether man" occasioning some anxiety in the perfecting of its sturdy symmetry, a carter, we believe, was laid hold of, and the *gamashins*, being pulled on for half-an-hour, Tam's *right leg* was finished in rivalship of the said gentleman's *supporter*. It appears to have been agreed upon that he should return at a fitting opportunity, having thus left Tam "hirpling;" but, in the interval, the story of the sitting unfortunately taking *air*, and the soubriquet of "Tam o' Shanter" threatening to attach to the lawful and Christian appellations of the man of carts, no inducement could again bring him within the unhallowed precincts of our sculptor's workroom. In like manner, though at a somewhat later period, while the artist was engaged upon the figure of the landlady, no persuasion could prevail upon one of the many "bonny lasses" who have given such celebrity to Ayr, to exhibit even the "fitting of their pearlings" to Mr. Thom's gaze. One sonsy damsel, on being hard pressed to grant a sitting, replied, "Na, na, I've nae mind to be nicknamed 'landlady;' and, as for gudewife, twa speerings maun gang to that name."

It will, doubtless, excite the admiration of every one in the slightest degree conversant with the Arts, that these figures, so full of life, ease, and character, were thus actually executed without model, or drawing, or palpable archetype whatsoever. The artist, indeed, knows nothing of modelling; and so little of drawing, that we question if he would not find difficulty in making even a

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tolerable sketch of his own work. The chisel is his modelling tool—his pencil—the only instrument of his art, in short, with which he is acquainted, but which he handles in a manner, we may say, almost unprecedented in the history of sculpture. This, however, is the minor part; for we think, nay, are sure, we discover in this dexterity of hand, in this unerring precision of eye, in this strong, though still untutored, conception of form and character—the native elements of the highest art. These primordial attributes of genius, by proper culture, may do honor to the country and to their possessor. At all events, instruction will refine and improve attempts in the present walk of art, even should study be unable to elevate attainment to a higher. Now, however, it would be not only premature, but unjust, to criticise these statues as regular labors of sculpture. They are to be regarded as wonderful, nay, almost miraculous, efforts of native, unaided, unlearned talent—as an approach to truth almost in spite of nature and of science; but they do not hold with respect to legitimate sculpture—the high-souled, the noblest, the severest of all arts—the same rank as, in painting, the works of the Dutch masters do as compared with the lofty spirits of the Romans—precisely for this reason, that while similar subjects are not only fit, but often felicitous, subjects for the pencil, they are altogether improper objects of sculptural representation.'

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BUFFALO LIGHT HOUSE.

We find in a Buffalo paper a view of the Light House in that town, a copy of which is presented above. The original sketch was furnished by Isaac S. Smith, Esq., the superintendent of the work, who has also given the following account of its construction:

It is situated on the Molehead, or outer end of the Stone Mole, which projects one thousand five hundred feet from the shore, and on the south protects the harbor from the swell and ice of Lake Erie.

The base of the Molehead, (in fifteen feet of water,) is of a pentangular form, about one hundred and sixty feet in its greatest diameter. A little above the surface of the water, it forms three-fourths of a circle, as shown by the print, whence it rises by an inclined plane of heavy stones placed on their edges closely in contact with each other, to the horizontal summit twelve feet wide, which surrounds the light house. Connected with the view of the Molehead, we give a short section of the mole, which in front is a wall of heavy stones, laid

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in Hydraulic mortar raised four feet above the water to the tow path or landing, which is twenty-one feet wide, and flagged with very large, thick, flat stones. The wall of the mole laid in mortar, rises perpendicularly twelve feet to the summit; which, like the tow path, is flagged with large flat stone.

The foundation of the light house is a mass of solid masonry, in Hydraulic lime, thirty feet in diameter, and nine feet deep. The basement of the light house, (forming an oil vault,) commences on the foundation, with a wall seven feet thick, tapering to four feet in the summit of the mole.

The tower is an octagon constructed of hewn yellowish Limestone, forty-four feet high, twenty feet in diameter at the base, and twelve feet at the top, under the cornice. The walls are four feet thick at the base, tapering to two feet at the top, having at intervals of about six feet, iron bands in the middle of the wall to prevent the possibility of spreading. On the inside is a spiral or geometrical stone staircase, so constructed that each step has its broad end imbedded in the wall, while its outer end constitutes a section of a central column. The floors and deck are of hewn stone, the doors and scuttles of copper, and the window sashes of wrought iron, so that there is not a particle of wood in or about the building except the boom, of necessity made of wood, which sustains the copper electric conductor.

The lighting apparatus is in every respect of the most approved and perfect kind.

The following sailing directions are given for vessels approaching and entering the harbor:

"Whenever vessels find themselves in any position southward of the light house, they must steer

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directly for it, but in the night should never approach within eighty yards at any time when it bears northward of east, or northward of west. When it bears east, run for it until within not less than fifty yards, then double the mole head and steer east by south into the harbor, keeping in the middle between the mole and the north pier. A vessel should never be suffered to get so far north in the night, as to bring the light to bear any where southward of east, except when within a quarter of a mile.

"There are sunken rocks about three quarters of a mile about northwest from the light, which can always be avoided in the daytime."

The number of passengers who have left Buffalo for the West in steamboats alone, during the season, taking the average to the close, will be from sixty-five to seventy thousand. The amount of tolls on the canal for the year 1829, was twenty-five thousand eight hundred and seventy-three dollars; for 1833, it was seventy thousand dollars.

CHIVALRY.

The institution of chivalry was most probably formed before the Crusades to the Holy Land, to which some imagine that it gave rise. It exerted a great influence upon society during the 12th, 13th, 14th, and 15th centuries.

The people of those ages were much oppressed by the operation of the feudal system. The poorer and weaker classes had no protection against the greater, and abuses were daily committed, which nothing but a combination of gentlemen devoted to the protection of their fellow men could remedy.

When the northern nations had overturned the

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Roman empire, they established a number of petty governments upon its ruins. Under the arrangement, called the feudal system, each lord had absolute power over his vassals. The spirit of feudal times survived to a very late period, and even up to the time of the revolution in France, near the close of the last century, many of the most cruel of the feudal laws were in operation.

At the time we speak of, it became necessary for those who wished to preserve an appearance of justice, to enter into a combination, binding themselves to preserve inviolate principles of honor and integrity, and to protect the weak from the strong. With such good intentions, chivalry was instituted.

In those lawless days men did not listen to the arguments of justice, unless they were enforced by an appeal to their personal feelings and interests. The fountains of justice were impure, and therefore law was regarded but as another word for fraud. A blow, from a stout lance or a sharp sword, was more convincing to an evil-doer, than a remonstrance from a clergyman, or an appeal from an injured lady. Chivalry, therefore, to meet the exigences of the times, was a warlike institution.

The crusades which were undertaken with the fire of religious zeal, and the thirst for military glory, opened a wide field for the prowess of the Christian knights. They fought and bled for the sake of restoring the places sanctified by the occurrence of the events of sacred history, from the hands of the unbelievers who held them. With a singular misinterpretation of the wild spirit of our religion, they shed blood in torrents, to advance the progress of Christianity. The cross designed upon their mantles and their shoulders, whence they derived their name, was not less red than the

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swords which they sheathed in the bodies of their enemies.

One great object with the Crusaders was the possession of the Holy Sepulchre. And the burden of their warlike songs brought that memorable place to mind,

> ——The cross, the Holy Sepulchre,
> Remember, oh! remember!

They returned from these expeditions, with minds full of religious enthusiasm, and military ardor, and sought at home for the occupation of both. Thus, the union of religion with all their exploits and professions, was indissoluble.

The knights went through preparatory trials, and none but those of stainless reputation were admitted to the order and privileges of chivalry. The most devoted attachment to the fair sex was mingled with their piety and the "love of God and the love of ladies," was protested in the same breath. Various devices and titles were assumed by the knights, and as the institution grew in favor, the utmost splendor found way into it.

The knights-errant led lives checkered by various and singular adventures. When a knight set forth, he was mounted on a gallant steed, being well-armed and generally accompanied by a trusty squire. When darkness and solitude, without the near glimmering of a single taper, from any friendly dwelling, overtook the knight, he flung himself at length upon his cloak, the leaves of the oak, and the spangled expanse of the sky forming his canopy. The horse, unbridled, found forage as he might, and the squire, if of "low degree," grumbled not a little at the inconveniences of the whole arrangement.

They were said to encounter every prodigy. One of the dearest duties of a knight-errant was to

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enlarge imprisoned damsels, and slay the cruel giants who confined them. The favorite writers of fiction, not content with presenting the dangers which chivalric gentlemen really encountered and overcame, represented captive the ladies as guarded by dragons, spitting fire, or by furious lions, which the heroes, with some slight opposition, invariably overcame.

The extravagances of chivalry were happily ridiculed by Cervantes, a Spanish gentleman of celebrity and courage, in the character of Don Quixotte. The "knight of the woful countenance," accompanied by his worshipful squire, Sancho Panza, performs feats of incredible courage but of a ludicrous nature. The poor gentleman, mistaking a windmill for a giant, whom he attacks, is terribly worsted in the encounter, while he certainly gets the better of the puppets, which he takes for real infidels.

The ridicule of chivalry however, is properly attached to the period when it was upon the decline, and when absurd observances were introduced into the system. Some exaggerations always found place in it, but perhaps no more than the unenlightened spirit of the times was ready to sanction.

A knight not only declared the virtue of the lady whom he loved, to be exalted, but he was ready to maintain by arms, against the world, that she was the fairest woman in the universe.

The knight endeavored as much as possible to soften the horrors of war by politeness, and a kind and courteous demeanor to the wounded and captive. This treatment was no more than just, at a period, when, from the absence of modern military inventions, wars were extremely bloody and ferocious. The knight bound up the wounds of his bleeding foe, frequently gave him his own

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horse to carry him, and, satisfied with victory, endeavored to show that he deserved it by his gentleness, as well as his courage.

In a time of peace, to keep alive the spirit of honorable rivalry in warlike actions, JOUSTS or tournaments, were held. At these, the knights fought in the presence of the fair, the grave, the gay, and the great, for the honor, generally, of their respective ladies. The lists, which were the scenes of their encounters, were enclosed and guarded. Heralds proclaimed the names and challenges, minute regulations were made, and any infringement of them severely punished.

Few exhibitions were so brilliant. A tournament, in times when intellectual enjoyments were in the possession only of few, formed a rallying point for the wealth, beauty, and nobility of a city or country. Before the eyes of those who took the deepest interest in their fate, the knights, splendidly armed and mounted, advanced. Amidst the clangor of martial music, they saluted the assembly, and displayed their address in managing their steeds. When the signal was given, the two opponents spurred their horses against each other, fixing their long, heavy lances, in the rest, in a horizontal position.

Sometimes the lances shivered, when new ones were supplied; sometimes the attacks proved fatal, and one of the warriors died in consequence of being flung violently from his horse on the arena. They fought with other weapons besides lances, and, to the dishonor of chivalry, instances occurred, in which fatal affrays took place — the excited knights fought fiercely with battleaxes, and a scene, began with martial sport, ended with bloodshed.

The honors of knighthood were conferred upon

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a candidate, only after he had gone through numerous satisfactory trials. After having given incontestable evidence of his courage and virtue, after having confessed his sins to the priest, fasted, bathed and heard mass, the honors of knighthood were bestowed upon him, in the presence of an august assembly. He took an oath, consisting of twenty-six articles, swearing among other things, to be a "good, brave, loyal, just, generous, and gentle knight, a champion of the church and clergy, a protection of the ladies, and a redressor of the wrongs of widows and orphans."

Alphonso V., king of Portugal, when he conferred the honor of knighthood upon his son, made him kneel down beside him, and gave him particular instructions, with regard to the duties of a knight. He told him to observe that as the priesthood was instituted for divine service, chivalry was for the maintenance of religion and justice. The true knight, the king said, was a husband to widows, a father to orphans, a protector to the poor. Discharging these duties, he lived honored and courted by the great, and loved by the fair; failing in them, he became infamous and abhorred.

Kings contended bravely in the ranks of chivalry, and the honors bestowed on military prowess were alike an object of ambition to the monarch, and the subject. In England, King Richard I. surnamed Cœur-de-Lion, or the Lion-hearted, was noted for his valor. The sultan Saladin in the East, contended with him in acts of courtesy and courage. During the reigns of King John and Henry III., chivalry rapidly declined in England. It revived, however, under the sway of Edward I.

Edward I. is said to have been one of the most accomplished knights of his age. He excelled his

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contemporaries in feats of arms, in which he took the greatest delight. As a proof of his military ardor, it is related that when he was eagerly expected in England, on his father's death, returning from the Holy Land, he heard of a tournament at Chalens in France, which he at once determined to attend, carrying his resolution into effect, and winning great fame.

With a design of subjugating France, Edward wished to call about him a band of warlike spirits, and accordingly held jousts and tournaments, to which he invited the brave and enterprising of the age. His son, the Black Prince, was a noted knight, distinguished for his gallantry in the field, and his courtesy when the battle was "lost and won."

Courtesy was regarded as the chief among chivalric virtues. It even laid the knights open to ridicule, since they preserved a show of politeness in their bloodiest acts, like the noted highwayman who "cocked his pistol with a grace," and uttered, "stand or die! with the politest air imaginable."

There can be little doubt that chivalry did much toward establishing many good principles, which remained when the institution which inspired them had long crumbled into dust. The proudest boast of the heroic knights should have been that sacred reverence of truth, which they rarely failed to entertain.

THE LOST NESTLINGS.

BY MISS GOULD.

"Have you seen my darling nestlings?"
A mother robin cried.
"I cannot, cannot find them,
Though I 've sought them far and wide.

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"I left them well this morning,
When I went to seek their food;
But I found, upon returning,
I 'd a nest without a brood.

"O, have you nought to tell me,
That will ease my aching breast,
About my tender offspring
That I left within the nest?

"I have called them in the bushes,
And the rolling stream beside,
Yet they came not to my bidding,
I 'm afraid they all have died!"

"I can tell you all about them,"
Said a little wanton boy,
"For 't was I, that had the pleasure
Your nestlings to destroy.

"But I did not think their mother
Her little ones would miss,
Or even come to hail me
With a wailing sound, like this.

"I did not know your bosom
Was formed to suffer wo,
And to mourn your murdered children,
Or I had not grieved you so.

"I 'm sorry that I 've taken
The lives I can't restore,
And this regret shall teach me
To do the thing no more.

"I ever shall remember
The plaintive sounds I 've heard
Nor kill another nestling
To pain a mother bird."

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SONGS AND DANCES OF THE NEW ZEALANDERS.

The New Zealanders have a variety of national dances; but none of them have been minutely described. Some of them are said to display much grace of movement: others are chiefly remarkable for the extreme violence with which they are performed. As among the other South Sea tribes, when there are more dancers than one, the most

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perfect uniformity of step and attitude is preserved by all of them; and they do not consider it a dance at all when this rule is not attended to. Capt. Dillon very much amused some of those who came on board his ship by a sample of English dancing, which he made his men give them on deck. A company of soldiers going through the manual exercise would certainly have come much nearer their notions of what a dance ought to be.

We are as yet very imperfectly informed in regard to the distinctions of rank, and other matters appertaining to the constitution of society, in New Zealand. It would appear, however, that, as among most other Asiatic races, the great body of the people are in a state approaching to what we should call slavery, or vassalage, to the few owners of the soil. Yet we are nearly altogether ignorant of the real extent of the authority possessed by the latter over the former Some circumstances seem to indicate, that in so far as respects the right of commanding their services, the chiefs are not absolutely the masters of the common people who live within their territories; while, on the other hand, they would appear to have the power, in some cases, of even putting them to death, according to their mere pleasure. Although there are no written laws in New Zealand, all these matters are, no doubt, regulated by certain universally understood rules, liberal enough, in all probability, in the license which they allow to the tyranny of the privileged class, but still fixing some boundaries to its exercise, which will accordingly be but rarely overstepped. Thus, the power which the chief seems to enjoy of depriving any of his slaves of life, may be limited to certain occasions only; as, for instance the death of some member of the family, whose

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manes, it is conceived, demand to be propitiated by such an offering. That in such cases slaves are often sacrificed in New Zealand, we have abundant evidence. Captain Cruise even informs us, that when a son of one of the chiefs died in Mr. Marsden's house, in New South Wales, it required the interposition of that gentleman's authority to prevent some of the boy's countrymen, who were with him, from killing a few of their slaves, in honor of their deceased friend. On other occasions, it is likely that the life of the slave can only be taken when he has been convicted of some delinquency; although, as the chief is the sole judge of his criminality, he will find this, it may be thought, but a slight protection. The domestic slaves of the chiefs, however, it is quite possible, and even likely, are much more completely at the mercy of their caprice and passion, than the general body of the common people, whose vassalage may, after all, consist in little more than the obligation of following them to their wars, and rendering them obedience in such other matters of public concern.

Use of Forks.—A foreigner remarks, in his work on Great Britain, that an Englishman may be discovered anywhere if he be observed at table, because he places his fork upon the left side of his plate; a Frenchman by using the fork alone without the knife; and a German by planting it perpendicularly into his plate; and a Russian by using it as a toothpick. Holding the fork is a national custom, and nations are characterized by their peculiarities in the use of the fork at table. An affectation of the French usages in this respect seems now to be gaining ground in this country.

Whenever you speak any thing, think well, and look narrowly what you speak; of whom you speak; and to whom you speak, lest you bring yourself into great trouble.

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DUBLIN.

The city of Dublin, the metropolis of Ireland, is the capital of the county of the same name. It is about three miles in length, and two in breadth; and is seated at the head of a spacious bay, seven miles from the Irish sea. It has two cathedrals, nineteen parish churches, twenty-seven Roman Catholic chapels, numerous meeting-houses for sects of various denominations, four foreign churches, and a synagogue. Among the principal public buildings are the castle, (the residence of the viceroy,) the National Bank, (formerly the Parliament House,) Trinity College, the Law Courts, the Royal Exchange, the Custom House, the Royal Hospital of Kilmainham for invalids, the Linen Hall, the Theatre Royal, and the Royal Barracks; also, Carlisle, Essex, and Sarah bridges, three of the seven over the Liffey. The Phenix Park, at the west end of the city, is a royal enclosure, seven miles in circuit; it includes the villa of the viceroy, the seat of the principal secretary, and a few others; also, the Hibernian schools, a salute battery, and the ammunition magazine. Besides the silk, woollen, and cotton manufactories, carried on in the suburbs, there are other branches of useful traffic in different parts of the metropolis; and its foreign trade is considerable. The harbor is obstructed by two banks of sand, which prevent vessels of large burden from going over the bar; it has a mole nearly four miles in length, with a lighthouse at the extremity, and another on the promontory opposite, called the Hill of Howth; on the northwest side of which is an extensive pier, enclosing a spacious harbor. Three miles below the city is a fortress, called the Pigeon House; and here, also, is a commodious dock. The Liffey divides the city almost

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into two equal parts, and has extensive and noble quays on both sides. Two canals pass from the Liffey, named the Royal and the Grand: the latter extends upwards of forty miles to the Barrow navigation, and a branch is carried in a west direction to the Shannon, below Banagher; the former communicates with that great river above Lanesborough, and by a lateral cut, unites with the Boyne.

HINTS TO TALKERS.

I was once walking along one of the long and empty streets in the west end of London, along with a young friend, who, like myself, generally resided in Edinburgh, but now was just returned from an extensive tour in the United States of America. Suddenly, my companion started, and seemed greatly alarmed, saying, hurriedly, "For God's sake, let us go down this side street!" I accompanied him in the direction he indicated, though I could see nothing in front to alarm him, nor indeed any object at all, except a well-dressed middle-aged looking man, who was advancing from the opposite direction, and was still at a considerable distance. When we had reached a place of safety, as my friend called it, he gave the explanation, which he saw from my looks was required. "That gentleman," said he, "whom we were just now about to meet, is a valetudinarian whom I had the misfortune to encounter in a coffee-house when I was last in London. I do not think he is really very ill: only, like the most of Englishmen, he has perhaps been all his life in the habit of every now and then taking what they call a little medicine, and may have thus, perhaps, made himself ill in spite of himself.

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However, having fallen into conversation with the old gentleman one evening in the public room at our hotel, he began to give me such a recital of his many and complicated disorders, and of his various attempts to get quit of them, as made me almost as ill as he represented himself to be. I tried many expedients to cut him short, but was at length fairly obliged to take refuge in my bedroom. Nothing else would do. Now, the man would not perhaps be so very tiresome as he is, if it depended solely on what he has to say. But besides the tedium of his endless recital of clinical miseries, there is an unhappy dulness in his very voice, which proves by far the severest part of the affliction. If a sloth, for instance, were a beast of prey, which fastened upon you as a spider does upon a fly, and if it emitted a humming self-satisfied sound while sucking your blood, like a schoolboy at his bread and butter, your circumstances and sensations would, I dare say, exactly resemble mine when this man was pouring his prosey stream into my ears. I positively had to go to the opera next night, in order to restore my nerves to their wonted tone. Before that time, however, you may be sure I had taken care to shift my quarters, to prevent the possibility of falling in with the same man again. I did not see him any more, sir, till about a twelvemonth after, when, in turning the corner of a street in New-York, I met him full in the face, and, of course, fell plump into his toils. After the slightest possible recognition, "Oh, by the way," said he, laying, at the same time, a finger like a grappling-iron aboard of my button-hole, "as I was saying when I saw you last, I got no good of Lignum's scorbutic drops. All stuff, sir. The irritation continued as bad as ever" —and so on he went, with his monotonous gummy

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voice, as if the time and space that intervened since our last rencounter had been as nothing in his estimation. Why, sir, there is a particular jest in Joe Miller, which I always used to think highly improbable, though certainly very droll. A gentleman, riding along a bridge one day, turned about to his servant, and asked if he liked eggs, to which, saith the chronicler, John answered 'Yes.' 'How?' said the gentleman exactly that day twelvemonth, at the same hour, when passing along the same bridge. 'Poached, sir,' replied the man, without a moment's hesitation. I always used to think this a mere fiction; but now, I saw that such an incident might be quite real. There is nothing, sir, on earth like the perseverance of a regular twaddler in the line of his vocation. You may break him off if you will, or if you can; but till you have fairly heard him out, he will never think himself quits with you — he still holds himself in readiness, at whatever part of the world or whatever period of future life he meets you again, to resume the thread of his discourse.

"I listened, sir, for half an hour to the leaden narrative, which still seemed as far from the conclusion as ever. Many an effort I made to give the affair a turn—to throw in a jest, and escape under its cover—but no: every struggle I made served but to fix his finger the more nervously in my cloth. I had no consolation but the apathy of despair, and that I could not resign myself to. However, as good luck would have it, a procession came suddenly upon us, preceded by a band of music, and followed by a sweeping crowd of boys. We were for half a minute drifted along together, he still clinging furiously to the breast of my coat; but at length he parted from me, and, to my infinite

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satisfaction, I saw him borne away in a contrary direction from myself—still turning, however, towards me an eager and anxious look, as if he were like to burst with suppressed information respecting the efficacy of Morrison's universal medicines.

"Sir, I met my tormentor once more; but it was on the tops of different stage-coaches, which were passing each other upon the road. He recognised me just as we shot athwart each other: his dull eye kindled, he threw forward his heavy head as if to speak, and instinctively put forth his finger to catch hold of my button. I was safe, however, for this time. We were rapidly taken out of each other's sight. I could only guess, by his look, as he loomed away into the distance, how distressed he was at being still obliged to postpone what he had to say about the medical preparations which he was beginning to discuss in New-York. Since then, I have not once met him till this day; and you may conceive, from what I have told you, how much reason I had to be alarmed at his approach, how much reason to be delighted at my good fortune in eluding him. This pleasure, however, is only temporary. I am destined, I see, to hear out his story: go where I like, it will come upon me somewhere. All I can do is to put off the evil day as long as I can."

If there be any spark of humane feeling in the twaddlers, they will surely be impressed by this striking anecdote of the misery inflicted by one of their fraternity, and will exert themselves as much as possible to correct their fault. Just let every man make a resolution never to speak above fifteen seconds at a time about himself, or any thing that is his, and he will never be otherwise than an agreeable member of the community. There is a respectability in suffering which disposes every man

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to listen for awhile, with decent attention, to the narratives which sick people are always so ready to give to their friends. But this good and kind feeling should not be abused: there is a limit to our sympathies, beyond which all is hypocrisy; and it would be well if the afflicted would join a just calculation of this extent of general compassion, with their own sense of the importance of their distresses, when they begin to talk upon the subject. If there be this limit to our interest in the sick, how much narrower are the bounds of that which we are naturally inclined to take in the personal affairs and little vanities of able-bodied men! We should, if we really esteem ourselves, be far above all miserable attempts to set ourselves off before a neighbor, by boring him, as he will call it, with our concerns, when he has enough to attend to, of his own.

QUOTATIONS.

There are a few unfortunate passages in the works of the British classic writers, which exist in a state of perpetual torture and suffering, being taken hold of on all possible occasions by modern authors, and forced to tag out their meaning whenever they are at a loss for an idea out of their own heads. Weak writers—a body who, if numbers signified strength, would be most respectable—could never get on if it were not for quotations; but while it is fun to them, as in the famous case of the boys and frogs, it is death or worse to the gentlemen whose writings are thus pillaged. The reading of Hamlet, for instance, is positively spoiled, in consequence of the ridiculous associations which arise at every other line, in consequence of the uses made

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of it by the herd of writers whose works are most commonly in our hands. "Alas, poor Yorick!" has lost all its pathos, from its being applied to every funny fellow who has died during the last two centuries, or at least since the days of Sterne; and we now look upon the declaration of the Prince of Denmark, as to the improbability of there ever being another man like his father, as the height of nonsense; seeing that "we ne'er shall look upon his like again" has been said in half the obituary notices of equivocal public characters we can recollect having ever perused. The better plays of Shakspeare are all in pretty much the same predicament. The felicity of that man's diction has been the death of him, and we find him bad because he is so good. We loathe Macbeth, because we never hear in modern literature of a man making wry faces at medicine, but what we are informed that he exclaimed, in a burst of antipathy, "Throw physic to the dogs—I'll none of it!" We detest King Richard, because there is not an ill-mounted sportsman in the country who will not cry "Bring me another horse." Even the fine fancies of the Tempest are become disagreeable to us, since the remark of Trinculo, that "misery makes us acquainted with strange bed fellows," has been found applicable to so many circumstances. All this, of course, is a fine illustration of the danger in which a man stands from his friends.

Small scribblers in newspapers, contributors of paragraphs about public rejoicings, private festivities, and other local matters, seem to find quotations particularly indispensable, their intelligence being generally so trivial and vapid as to be unfit to stand by itself. In a public rejoicing, the bells are always sure to "ring out a merry peal," and the

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crowds of people to be "thick as leaves in Vallambrosa." In the case of a ball, the "light fantastic toe" comes finely in; in that of a dinner, the night invariably "drives on wi' sangs and clatter," and the company would take scorn to separate before "the wee short hour ayont the twal." If the undue interference of a magistrate be commented on, then to be sure we have the unhappy Shakspeare dragged in to administer censure—

> "Oh man, vain man,
> Dressed in a little brief authority, &c."

In fact, these tags of old authors serve as points to the blunt and aimless sentences of the moderns. We, nowadays, have all of the epigram but the sting, and that we are obliged to borrow from our predecessors. Who ever speaks of obscure genius, but he seizes upon some such recondite passage as

> "Full many a flower is born to blush unseen,
> And waste its sweetness on the desert air?"

Who ever describes eloquent writing, without bringing in our old friend—

> "Thoughts that breathe and words that burn?"

Who ever indicates the variety of styles in any particular writer, or in his own compositions, without going

> "From gay to grave, from lively to severe?"

Or who ever writes a sententious account of an unfortunate wretch, but concludes with the pithy remark, that he was only suited to

> "Point a moral or adorn a tale?"

And, above all, who ever tells us in print of the rarity of the appearances of any object, animate or

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inanimate, without taking a vast deal of pains to mention that they were

"Like angels' visits, few and far between?"

Oh, these angels and their visits will surely some day be the death of us.

Can any one think of a teacher, but he must draw upon Thomson for—

"Delightful task?" &c.

or upon Lord Brougham, for his still more celebrated declaration, that "the schoolmaster is abroad"—a phrase now absolutely nauseous from frequency of repetition. When a fine new colony is spoken of, it is of course "a land overflowing with milk and honey," even although bees should not have yet found their way to the country, and cows are so scarce (owing to their having to be carried eight or ten thousand miles,) that they sell at sixty pounds each, and only can be had by the people of first-rate fortune. When a population is happy in an old country, every man "sits under his own vine and fig-tree," though it is more likely, that, while some enjoy themselves in their dining-rooms beside a coal fire, others frequent the neighboring ale-houses during the first three days of the week, being able to make enough to live upon, by working during the remainder. A slight inapplicability, however, is nothing in a quotation, provided only that it give a kind of sense and expression to a sentence which would otherwise be void of both. Thus, a description of an island may be rather tame, the object being itself perhaps rather so; but if by hook or by crook it can be

"Placed far amid the melancholy main,"

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(though possibly only two miles from shore,) then does it catch a grace from another and more poetical mind, and passes off well enough. On the same principle, we will wish for

> "—— a lodge in some vast wilderness,
> Some boundless contiguity of shade;"

though, in reality, a walk in some neighboring plantation, upon which we are forbidden to intrude by men-traps and spring-guns, would satisfy us to our heart's content.

To be serious: Modern English writers act very sillily in introducing so many quotations from the works of former authors. Such a practice indicates not only a want of taste, but a want of the powers of original thinking, or, at the least, a want of confidence in these powers. We are of opinion that every writer should stand on his own merits alone. The sentiments to be expressed ought to be given to the reader in a plain straight-forward manner, without affectation, and in as simple and intelligible a language as possible, without the extrinsic aid of trappings from the productions of others.

Quotations of words and sentiments from the Latin, French, or other foreign tongues, are particularly hateful. The exclamation, "O tempora, O mores," has been applied to every period and state of society during two thousand years, and it is really time it were abandoned. The sin of introducing classic phrases, or of alluding on all occasions to heathen deities, is certainly now much less common than during a former age, when pedantry was frequently accepted as a proof of refinement; still they are too frequently indulged in. The puerile and fictitious transactions of Homer's heroes and heroines are a source of particular annoyance:

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we feel convinced that if any man would purge our literature of allusions to the "shield of Ajax," he would deserve a reward for his great public service. Surely our own noble and expressive language is sufficient for every useful and ornamental purpose in every kind of composition calculated for popularity. Away, then, with the paltry practice of interlarding English writing either with foreign words, or what are styled classic allusions, which are injurious to good writing, of no value whatever to that which is bad, and in almost every case thoroughly useless.

WEAPONS OF THE NEW ZEALANDERS.

The musket has in a great measure superseded the primitive weapons of the New Zealander, although the New Zealanders are as yet far from being expert in the use of it. By Rutherford's account, they only fire off their guns once, and throw them away as soon as they have got fairly engaged, much as some of the Highland regiments are said formerly to have been in the habit of doing. Captain Cruise, in like manner, states that they use their firelocks very awkwardly, lose an immense deal of time in looking for a rest and taking aim, and after all, seldom hit their object, unless close to it. Muskets, however, are by far more prized and coveted by the New Zealander than any of the other commodities to which his intercourse with the civilized world has given him access. The ships that touch at the country always find it the readiest way of obtaining the supplies they want from the natives, to purchase them with arms or ammunition; and the missionaries, who have declined to traffic in these articles, have often

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scarcely been able to procure a single pig by the most tempting price they could offer in another shape.

THE PLACE VENDOME.

Since the time of Louis XVI., while many of the ancient architectural ornaments of Paris have been razed to the ground, many new and splendid edifices have been erected in their places; and almost every year has added something both to the embellishment and extension of the city. The number of convents, immediately before the Revolution, amounted to one hundred and thirty-three; and of the buildings belonging to these establishments the greater number have been either demolished or

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converted to other purposes. Squares and market-places have been erected on the sites of some; others have been turned into prisons, hospitals, barracks, and schools. Many new streets also have risen on the extensive grounds formerly occupied by these institutions, of which only a small number were re-established after the restoration of the Bourbons.

Since that period, the principal additions which have been made to the extent of the city, have been in what is called the Quartier Poissonière, to the east of La Chaussée d'Antin, and in the new quarter which has been formed immediately to the west of the Champs Elysées. All these erections, however, are still within the limits assigned to the city in the time of Louis XVI. The wall built in his reign, and still forming the boundary of Paris, has been since surrounded by a road planted with trees, which bears the name of the Boulevard Extérieur, the epithet of Intérieur being given to that formed by Louis XVI. The Boulevard Extérieur was not completed till the close of the reign of Napoleon. To the taste and energy of the Emperor, Paris owes many of its most magnificent embellishments. A much more complete supply of water than the city had ever before possessed — the public granaries in the garden of the Arsenal — the Abattoirs, many new markets, quays, and cemeteries — the Pont d'Austerlitz, the Pont de Jena, the Pont des Arts, and the Pont de la Cité, may be mentioned among the improvements of which he was the author. The Exchange (which, however, was only completed in 1826), the Column of Victory in the Place Vendôme, the Triumphal Arches of the Place du Carrousel, and of the Etoile, (still unfinished), and the splendid new streets of Castiglione de la

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Paix, and Rivoli, immediately to the north of the Tuileries, were either commenced or completed during the period of Napoleon's domination.

POPULAR ERRORS IN MEDICINE.

BY AN EDINBURGH PHYSICIAN.

A very common practice in eating such fruit as cherries is to swallow the stones, with the vague notion that these promote digestion. No error can be more fatally absurd. Many cases have occurred where such practices have been the cause of death, and that of a most excruciating nature. One instance is on record of a lady who died in great agony after years of suffering, and the cause was found to be several large balls found in the intestines, accumulated around clusters of cherry-stones. The husks of gooseberries are often swallowed with the idea that they prevent any bad effects from the fruit. On the contrary, they are the most indigestible substance that can be swallowed, and pass the stomach without any change, although they cause excessive irritation, and not unfrequently inflammation in the bowels.

Many people put great faith in the wholesomeness of eating only of one dish at dinner. They suppose that the mixture of substances prevents easy digestion. They would not eat fish and flesh, fowl and beef, animal food and vegetables. This seems a plausible notion, but daily practice shows its utter absurdity. What dinner sits easier on the stomach than a slice of roast or boiled mutton, and carrots or turnips, and the indispensable potato? What man ever felt the worse of a cut of cod or turbot followed by a beef-steak, or a slice of roast beef and pudding?

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In short, a variety of wholesome food does not seem imcompatible at meals, *if one do not eat too much*—here the error lies.

It is a common practice with bathers, after having walked on a hot day to the seaside, to sit on the cold damp rocks till they cool before going into the water. This is quite erroneous. Never go into the water if over-fatigued, and after profuse and and long-continued perspiration, but always prefer plunging in while warm, strong and vigorous, and even with the first drops of perspiration on your brow. There is no fear of sudden transitions from heat to cold being fatal. Many nations run from the hot bath, and plunge naked into the snow. What is to be feared is sudden cold after exhaustion of the body, and while the animal powers are not sufficient to produce a reaction or recovery of the animal heat.

There is a favorite fancy of rendering infants and farther advanced children hardy and strong, by plunging them into cold water. This will certainly not prevent strong infants from growing stronger, but it will and often does kill three children out of every five. Infants always thrive best with moderate warmth and a milk-warm bath. The same rule applies to the clothing of infants and children. No child should have so slight clothing as to make it feel the effects of cold — warm materials, loose and wide-made clothing, and exercise, are all indispensable for the health of little ones. But, above all things, their heads should be kept cool, and generally uncovered.

Many people so laud early rising as would lead one to suppose that sleep was one of those lazy, sluggish, and bad practices, that the sooner the custom was abolished the better. Sleep is as necessa-

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ry to man as food, and as some do with one-third of the food that others absolutely require, so five hours' sleep is amply sufficient for one, while another requires seven or eight hours. Some men cannot by any possibility sleep more than four or five hours in the twenty-four; and, therefore, true to the inherent selfishness of human nature, they abuse all who sleep longer. No man should be taunted for sleeping eight hours if he can.

Many people do not eat salt with their food, and the fair sex have a notion that this substance darkens the complexion. Salt seems essential for the health of every human being, more especially in moist climates such as ours. Without salt, the body becomes infected with intestinal worms. The case of a lady is mentioned in a medical journal, who had a natural antipathy to salt, and never used it with her food; the consequence was, she became dreadfully infected with these animals. A punishment once existed in Holland, by which criminals were denied the use of salt; the same consequence followed with these wretched beings. We rather think a prejudice exists with some of giving little or no salt to children. No practice can be more cruel or absurd.

Destructive Kissing.—Cicero speaks of a bronze statue of Hercules which had the features worn away by the frequent osculations of the devout. Several instances of the same kind have occurred in modern times. The face of a figure of the Saviour among the bronze bas reliefs which adorn the Casta Santa at Loretto, has in this way been quite kissed away. The foot of the famous statue of St. Peter, in the Vatican, has lost much of its metal by the continual application of the lips and foreheads of votaries; and it has been found necessary to protect the foot of the statue of the Saviour by Michael, in the Minerva, from similar injury, by a brass buskin.

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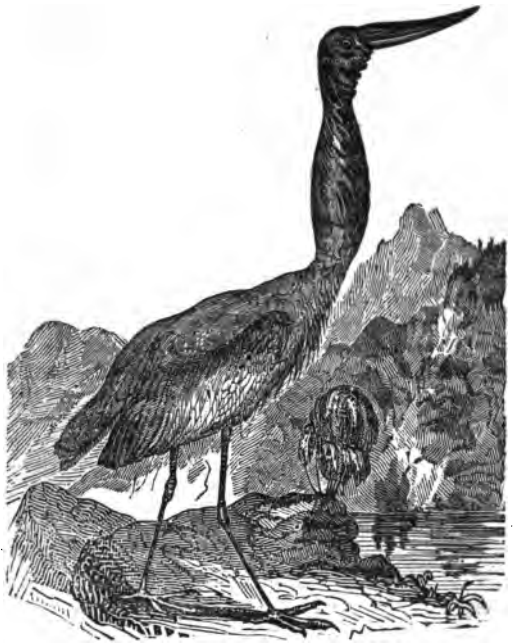

THE JABIRU.

The South American Jabiru is more than four feet high, and is six in length from the tip of the beak to that of the claws. It has a large black bill above thirteen inches long, and three in thickness at the base. The head and most of the neck of this bird are covered with a black and naked skin, thinly scattered with a few gray hairs. The general color of the plumage is white, but about the lower part

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of the neck is a large band of beautiful red. In the rainy season the Jabiru grows fat, and the natives consider it at that time excellent eating. These birds live in flocks, building their nests in trees hanging over the water and laying two eggs. They feed chiefly on fish.

A YOUNG POET'S OWN EPITAPH.

A few weeks before John Keats died of decline, at Rome, a gentleman, who was sitting by his bedside, spoke of an inscription to his memory. Keats desired that there should be no mention of his name or country. "If there be any thing," he said, "let it be, *Here lies the body of one whose name was writ in water.*"

THE TALIPOT TREE OF CEYLON.

There are few objects in the vegetable kingdom more remarkable and beautiful, or more useful to man, than the Talipot tree, which is a species of palm (the *corypha umbraculifera* of Linnæus) peculiar to the island of Ceylon, and the Malabar coast, and is said to be found also in the Marquesas and Friendly Islands. Robert Knox says that it is as big and as tall as a ship's mast, but Cordiner gives more definite dimensions by stating that one which he measured was a hundred feet high and five feet in circumference near the ground. The stem of this tree is perfectly straight; it gradually diminishes as it ascends, the circumference of the upper part being about half that of the base: it is strong enough to resist the most violent tropical winds. It has no branches, and the leaves only spring from its summit. These leaves, which when on the tree are almost circular, are of such prodigious diameter that they can shelter ten or a dozen (Knox says from fifteen to twenty) men,

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standing near to each other. The flower of the tree which shoots above the leaves is at first a cluster of bright yellow blossoms, exceedingly beautiful to the eye, but emitting an odor too strong and pungent to be agreeable. Before its developement the flower is enclosed in a hard rind, which rind, upon the expansion of the flower, bursts with a sharp noise. The flower shoots pyramidically to a great height, frequently adding as much as thirty feet to the elevation of the tree. From the flower proceed the fruit or seeds, which are as large as our cherries, and exceedingly numerous, but not eatable: they are only useful as seeds to reproduce and multiply the tree. It appears that the natives do not sow them, but leave that operation entirely to nature. The flower and the fruit only appear once on one tree. Their appearance betoken that the tree has attained to old age, which, according to the natives, it does in a hundred years: Ribeyro, a Portuguese writer, says, in about thirty years, which is more likely to be correct.

As soon as the fruit or seeds are ripe, the tree dries up and decays so rapidly that in two or three weeks it is seen prostrate and rotting on the ground. Knox asserts, that if the tree be cut down before it runs to seed, the pith, largely contained within the stem, is nutritious and wholesome, and adds, that the natives take this pith, "and beat it in mortars to flour, and bake cakes of it, which taste much like to wheat bread, and it serves them instead of corn before their harvest be ripe." We have not found these cakes mentioned by any other writer on Ceylon; but as Knox was so veracious and correct, we may admit that the natives were accustomed to make them. A better known fact about the uses of the inner parts of the tree, is, that

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sago is made from them. The stem or trunk of the talipot, like that of most other palms, is extremely hard without, but soft and spongy within, the greater part of its diameter being a soft brownish cellular substance. The sago is made by beating the spongy part of the stem in a mortar, by which means the fecula is procured. Still, however, the great usefulness of the tree is in its leaves. Growing on the tree, these leaves when expanded, are of a beautiful dark green color; but those chiefly used are cut before they spread out, and have, and retain for ages, a pale brownish yellow color, not unlike old parchment. Their preparation for use is very simple: they are rubbed with hard, smooth pieces of wood, which express any humidity that may remain, and increase their pliability, which is naturally very great. The structure of this wonderful leaf and the disposition of its fibres will be best understood by a glance at the engraving at the head of this article, in which the construction of the leaves is shown, particuiarly by those in the right-hand corner.

Our readers will there see that it is made precisely like a fan, and like a fan it can be closed or expanded, and with almost as little exertion. It is in fact used as a fan by the natives of Ceylon, and is at the same time their only umbrella and parasol; in addition to which uses it forms their only tent when they are in the field, and, cut up into strips, it serves them to write upon instead of paper.

The leaf is so light that an entire one can be carried in the hand; but as this, from its great size when expanded, would be inconvenient, the natives cut segments from it, which they use to defend themselves from the scorching rays of the sun, or

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from the rains. The narrow part is carried foremost, the better to enable those who use them to penetrate through the woods and thickets, with which most of the country abounds. No handles are used, but the two sides of the leaf are grasped by the bearer. "This," says Knox, in his quaint manner, "is a marvellous mercy which Almighty God hath bestowed upon this poor and naked people in this *rainy country!*" He ought to have added, in this *hot country*, for the heats in Ceylon, whose mean temperature is 81°, are frequently, and for long periods, tremendous, and the talipot leaf is quite as valuable as a protection against them as against rain.

However much water may fall on the leaf it imbibes no humidity, remaining dry and light as ever. The British troops in their campaign in the jungles against the Cingalese in 1817 and 1818, found to their cost how excellent a preservative it was against wet and damp. The enemy's musketmen were furnished, each with a talipot leaf, by means of which they always kept their arms and powder perfectly dry and could fire upon the invading forces; while frequently the British muskets, which had no such protection, were rendered useless by the heavy rains, and the moisture of the woods and thickets, and the soldiers were consequently unable to return the fire of the natives.

As tents, the talipot leaves are set up an end. Two or three talipot umbrellas thus employed make an excellent shelter, and from being so light and portable, each leaf folding up to the size of a man's arm, they are admirably adapted for this important service. The chiefs, moreover, have regularly formed square tents made of them. In these the leaves are neatly sewed together, and laid over a

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light frame work: the whole is light and can be packed up in a very small compass.

When used in lieu of paper, they are cut into strips (those which we have seen are about fifteen inches long by three broad,) soaked for a short time in boiling water, rubbed backward and forward over a smooth piece of wood to make them pliable, and then carefully dried. The Cingalese write or engrave their letters upon them with a stylus, or pointed steel instrument, and then rub them over with a dark colored substance, which only remaining in the parts etched or scratched, gives the characters greater relief, and makes them more easy to read. The coloring matter is rendered liquid by being mixed with cocoa-nut oil, and when dry is not easily effaced. On common occasions they write on the leaf of another species of palm-tree, but the talipot is used in all government despatches, important documents, such as title-deeds to estates, &c., and in their books. A Cingalese book is a bundle of these strips tied up together. As even the lawyers and the learned in this country are very deficient in chronological knowledge, great confusion occurs as to dates; and it is very common to see a Cingalese judge attempting to ascertain the antiquity of a document produced in court by smelling and cutting it.

The oil employed in the writing imparts a strong odor which preserves it from insects, but this odor is changed by age. The talipot, however, appears to have in itself a natural quality which deters the attack of insects and preserves it from the decay of age even without the oil. It may be worth while observing that the Cingalese who engrave the most solemn of their deeds, such as the foundation of, or donations to a temple, on plates of fine copper,

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which are generally neatly edged with silver, always make these plates of precisely the same shape as the talipot strips used for writing.

Besides all the uses described, the Cingalese employ the talipot leaf extensively in thatching their houses. They also manufacture hats from it; these hats are made with brims as broad as an outstretched umbrella, and are chiefly worn by women nursing, to defend them and their infants from the heat.

The talipot is not a very common tree at present, and is rarely seen growing by those who only visit the coasts of the island and do not penetrate into the interior. It seems to grow, scattered among other trees, in the forests. In a view of the town of Kandy, as it was in 1821, a fine specimen of the talipot, in flower, is seen close to a group of cocoa-nut trees.

NATURE.

In a state of nature no race of animals is unhappy; they are all adapted to the mode of life which God has ordained them to lead; and their chief enjoyment consists in pursuing their natural habits, whatever these may be. The woodpecker, while boring a tree, and clinging to it for hours by its scandent feet, is just as happy as the eagle is when perched upon the mountain cliff, or pouncing on its quarry from the clouds. Neither could lead the life of the other, but each is happy in the state which has been assigned to it; and this is observable throughout all nature. A rat, which burrows in a ditch, is as happy as it could desire, so long as it can find garbage sufficient to feed on; and a

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heron, immovably fixed watching for the approach of small fishes and frogs, has, there can be little doubt, as much pleasure as any lover of the angle can enjoy while wearing out the summer day in marking his light float, and waiting, in mute expectation, the wished-for bite. We generally, I believe, connect rapidity or slowness of motion with the ideas we form of an animal's happiness. If, like the tortoise, it move with slow and measured steps, we pity or despise, as the mood may be, its melancholy, sluggish condition; and the poor persecuted toad has, probably, incurred as much of the odium so unjustly attached to it, by its inactivity, as by the supposed loathsomeness of its appearance. On the other hand, enjoyment seems always to be the concomitant of celerity of motion. A fly, dancing in the air, seems more happy than the spider lurking in his den; and the lark, singing at "heaven's gate," to possess a more joyous existence than the snail, which creeps almost imperceptibly upon a leaf, or the mole, which passes the hours of brightness and sunshine in his dark caverns under ground. But these and all other animals are happy, each in its own way; and the habits of one, constituted as the creatures are, could form no source of felicity to another, but the very reverse. Though activity may stimulate the appearance of superior enjoyment, we may conceive, that where it is excessive, the animal in which it is so demonstrated must suffer much from fatigue. This would be another mistake, in so far as relates to animals in a state of nature. The works of God are all perfect in their kind; but if an animal were formed to lead a life of almost perpetual motion, and that motion were accompanied or followed by fatigue, the work would be imperfect: take the swallow as

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an example; it is constantly on the wing except at night. From the early morning to the downgoing of the sun, it is forever dashing through the air with the rapidity of an arrow, but neither morning nor evening does it ever show one symptom of weariness; it has a wing which never tires; and at night it betakes itself to repose, not worn out by the fatigues of the day, but prepared for sleep after what is to it a wholesome exercise.

'GYMNASTICS.

A late distinguished senator said in the parliament of England, "man is born to labor as the sparks fly upwards." This observation is founded on a thorough knowledge of the destiny from which none can escape. The idle are always unhappy, nor can even mental vigor be preserved without bodily exercise. Neither he who has attained to inordinate wealth, nor he who has reached the greatest heights of human intellect is exempt from the decree, that every man must "work for his living." If the "gentleman" does not work to maintain his family, he must work to maintain his life; hence he walks, rides, hunts, shoots, and travels, and occupies his limbs as well as his mind; hence noblemen amuse themselves at the turning lathe, and the workman's bench, or become mail

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coachmen, or "cutter-lads:" and hence sovereigns sometimes "play at being workmen," or, what is worse, at the "game" of war.

Without exercise the body becomes enfeebled, and the mind loses its tension. Corporeal inactivity cannot be persisted in even with the aid of medicine, without symptoms of an asthenic state. From this deliquium the patient must be relieved in spite of his perverseness, or he becomes a maniac or a corpse. Partial remedies render him "a nervous man;" his only effectual relief is bodily exercise.

Exercise in the open air is indispensable, and many who walk in the wide and rapidly extending wilderness of the metropolis have sufficient; but, to some, the exercise of walking is not enough for carrying on the business of life; while others, whose avocations are sedentary, scarcely come under the denomination of sesquipedalians. These resort to stretching out the arms, kicking, hopping, what they call "jumping," running up and down a pair of stairs, sparring, or playing with the dumb bells: these substitutes may assist, but, alone, they are inadequate to the preservation of health.

Some years ago a work on gymnastics, by Salzmann, was translated from the German into English. Its precepts were unaided by example; it produced a sensation, people talked about it at the time, and agreed that the bodily exercises it prescribed were good, but nobody took them, and gymnastics, though frequently thought upon, have not until lately been practised in London. Mr. Voelker, a native of Germany, has recently opened a gymnasium in that city.

This gentleman's prospectus of his establishment is judicious. He contends that while education has

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been exclusively directed to the developement of the mental faculties, the bodily powers have been entirely neglected.. "The intimate connexion between mind and body has not been sufficiently considered; for who does not know, from his own experience, that the mind uniformly participates in the condition of the body; that it is cheerful, when the body is strong and healthy; and depressed, when the body is languid and unhealthy?"

An inhabitant of the city need only look out of his own window to see practical illustrations of the necessity of these exercises. How often do we see a young man with an intelligent but very pale countenance, whose legs have hardly strength to support the weight of his bent and emaciated body. He once probably was a strong and active boy, but he came to the city, shut himself up in an office, took no exercise because he was not obliged to take any; grew nervous and bilious; took a great deal of medical advice and physic; took every thing in fact but the true remedy, exercise; and may probably still linger out a few years of wretched existence, when death will be welcomed as his best friend. This, though an extreme case, is a very common one, and the unfortunate beings who approximate to it in a considerable degree are still more numerous. Many of the miseries and diseases of young and old, male and female, in the city, may be traced eventually to want of exercise. Give us pure air, and we can exist with comparatively little exercise; but bad air and no exercise at all, are poisons of a very active description.

It is not easy to describe these exercises to those who have not seen them. They consist: First, Of preliminary exercises of the hand and legs, which give force and agility to those members, and

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prepare the body for the other exercises. Secondly, Horizontal parallel bars, from three to five feet high, according to the size of the pupil, on which he raises his body by the arms, and swings his legs over in a variety of directions: this exercise opens the chest, and gives great strength to the muscles of the arms and body. Thirdly, The horizontal round pole supported by posts from five to eight feet high, according to the height of the performer. An endless variety of exercises may be performed on this pole, such as raising the body by the arms, going from one end to the other by the hands alone, vaulting, swinging the body over in all directions, &c. &c. Fourthly, The horse, a large wooden block shaped like the body of a horse—the pupils jump upon and over this much-enduring animal in many ways. Fifthly, Leaping in height and distance with and without poles. Sixthly, Climbing masts, ropes, and ladders of various heights. Seventhly, Throwing lances, running with celerity and for a length of time, hopping, &c. &c. It is, moreover, in our option to take whatever portion of the exercises we may find most agreeable.

The improvement which the gentlemen who practice these exercises experience in health (not to mention strength, agility, and grace,) is very considerable, and altogether wonderful in several who have entered in a feeble and sickly state. This, one would think, would be sufficient to prove that the exercises are not attended with danger. Neither is their utility necessarily confined to boyhood, as several gentlemen upwards of forty can clearly testify; nor does the pleasure of practising them depart with the novelty, but always increases with proficiency and time.

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PLANTING.

The shop keeper turns his capital once in a week, or a month. The farmer turns his money once in a year; but the forest planter must discard the commercial maxim, "a small profit and a quick return," for he can scarcely turn his capital once in his life time. Still, however, nothing can pay better than the planting of waste lands with forest trees. Oaks, pines, ash, sycamore, elms and poplars, will give more profit than ferns, heaths, and rushes; and a practical man, with four laborers under him, could superintend five hundred acres. A man cannot amass a large property for his children by a small outlay, so surely as by planting.

Plantations are experimentally found, by the annual casting of their leaves, to lend material aid to the encouragement of the fine and more nourishing grasses; while, at the same time, they cause the destruction of the heath and other coarser productions of vegetation. By the influence of this annual top-dressing, hundreds, nay thousands of acres, have been rendered worth from five to ten shillings an acre instead of from sixpence to, at the utmost, two shillings. Whoever knows any thing of the comparative value of heath and greensward pasture, will allow that the advantages of converting the one into the other are very moderately stated at the above rates; and this wonder-

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ful transformation is made without the slightest assistance from human art, save that of putting suitable plants. The annual pruning of trees by the knife, makes them grow with great vigor. By experiment it appeared that plants which were pruned, advanced at the rate of four years in six before those which were not pruned. This treatment should be attended to every year, either winter or summer, or after they have been planted out. Lawn trees, groups, or outlines of plantations, should seldom be touched, or, at least, without a knowledge of picturesque effect. Were the proprietors of plantations sensible of the injury they do their posterity, they would no longer ignorantly, and, it may be said of many, obstinately, neglect this necessary improvement.

In the common course of gardening, it is found that pruning invigorates the tree, and that training-off judiciously the large side branches, makes the upright ones shoot the stronger. This doctrine will apply to all trees, particularly to the whole tribe of firs; it will undoubtedly substitute clear wood for knots; and, of all this management, from their particular uses, the latter, of all other trees, stand in most need, and will be most improved by it. This operation will advance the quality nearer to that of foreign timber; for it may be traced, that where trees are tall and clear of boughs or knots, (by cutting the branches close to the stem) the whole substance of the wood is better, and of finer grain; and it appears likely that such will always be the case.

The practice of cutting off large limbs to improve the timber should decidedly be condemned; we may daily see the deplorable effects of it. By judicious pruning and thinning every year, it will

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be found that poor land is converted by these means to a good purpose, and at a trifling expense.

RAILWAYS.

Before the establishment of the Liverpool and Manchester railway, there were twenty-two regular, and about seven occasional extra coaches, between those places, which, in full, could only carry, per day, 688 persons. The railway, from its commencement, carried 700,000 persons in eighteen months, being an average of 1070 per day. It has not been stopped for a single day. There has occurred but one fatal accident on it in eighteen months. The fare by coach was 10s. inside, and 5s. outside; by railway it is 5s. inside, and 3s. 6d. outside. The time occupied in making the journey by coach was four hours; by railway it is one hour and three quarters. All the coaches but one have ceased running, and that chiefly for the conveyance of parcels. The mails all travel by the railway, at a saving to government of two-thirds of the expense. The railway coaches are more commodious than others; the travelling is cheaper, safer, and easier. A great deal of traffic which used to go by other roads comes now by railway: both time and money are saved, though the length of the journey may be often increased. The proportion of passengers carried by railway over those carried by coach has been 22 to 10 in winter, and 17 or 18 to 10 in summer. A regiment of soldiers has been carried by the railway from Manchester to Liverpool in two hours. Gentlemen's carriages are conveyed on tracks by the railway. The locomotive travels in safety after dark. The rate of carriage of goods is 10s. per ton; by canal it used to be 15s. per ton.

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The time occupied in the journey by railway is two hours; by canal it is twenty hours. The canals have reduced their rates thirty per cent. Goods are delivered in Manchester the same day they are received in Liverpool; by canal they were never delivered before the third day. By railway, goods, such as wines and spirits, are not subject to the pilferage which existed on the canals. The saving to manufacturers in the neighborhood of Manchester in the carriage of cotton alone has been L.20,000 per annum; some houses of business save L.500 a year in carriage. Persons now go from Manchester to Liverpool and back in the same day with the greatest ease; formerly they were generally obliged to be absent the greater part of two days. More persons now travel on their own business. The railway is assessed to the parochial rates in all the parishes through which it passes: through only 31 miles, it pays between L.3000 and L.4000 per annum in parochial rates. Coal-pits have been sunk and manufactories established in the line, giving great employment to the poor; manufactories are also erected on the line, giving increased employment, and thus reducing the number of claimants for parochial relief. The railway pays one-fifth of the poor-rates in the parishes through which it passes. Fresh coal-mines have been sunk, owing to facilities of carriage and reduced price. It is found advantageous for the carriage of milk and garden produce: arrangements are about to be made for milk to be carried 15 miles at 1s. per 10 gallons (*i. e.*, less than one farthing per quart.) A great deal of land on the line has been let for garden ground at increased rents. Residents on the line find the railway a great convenience, by enabling them to attend to their busi-

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ness in Manchester and Liverpool with ease, at little expense. No inconvenience is felt by residents from smoke or noise, but, on the contrary, great advantages are experienced by means of travelling, to and fro, distances of ten miles in half an hour for 1s., and without any fatigue. The engines only burn coke. The value of land on the line has been considerably enhanced by the operation of the railway: land cannot be purchased but at a large increase in price; it is much sought after for building, &c. The Railway Company, in their late purchases, have been obliged to pay frequently double the price they originally paid for their land. A great deal of land has been sold for building at three times its former value. Much waste land on the line has been taken into cultivation, and yields a good rent. Land-owners, originally opposed to the railway, are now its warm advocates: having found their fears wholly groundless, they have now been solicitous that the line should pass through their land. Mr. Babbage observes, in his book on the "Economy of Manufactures," "One point of view in which rapid modes of conveyance increase the power of a country deserves attention. On the Manchester railroad, for example, above half a million of persons travel annually; and supposing each person to save only one hour in the time of transit between Manchester and Liverpool, a saving of five hundred thousand hours, or of fifty thousand working days of ten hours each, is effected. Now, this is equivalent to an addition to the actual power of the country of one hundred and sixty-seven men, without increasing the quantity of food consumed; and it should be also remarked, that the time of the class of men thus supplied is far more valuable than that of mere laborers."

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The great utility of railways, and their productiveness in a pecuniary point of view, have just been exemplified at Edinburgh, where a railroad, formed for the purpose of introducing coal to the city from pits a few miles distant, has been covered with vehicles for the conveyance of passengers to all parts of the adjacent country.

MONKEY'S BREAD.

This tree is a native of the western coast of Africa, and also of Egypt. In the former country it is described by Adanson as being a tree of large dimensions and singular economy. The trunks were about twelve or fourteen feet high, but of the vast circumference of sixty or seventy feet. The lateral branches were forty or fifty feet long, of the thickness of a great tree, and with their remote branches touching the ground; while some of the roots that had been laid bare were upwards of a hundred feet long, and even then were not exposed for their whole length. The fruit is from nine to

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twelve inches long, and about four in diameter, of a brownish color, and rather pointed toward the extremities. The pulp is a little farinaceous, mixed with fibres: when recent, it has a very refreshing, acid taste; and eaten with sugar, it is both pleasant and wholesome. It retains its cooling qualities when dry; and, on that account, the physicians of Cairo administer it in fevers and other diseases.

ON THE UTILITY OF THE REMARKS AND OBSERVATIONS OF MECHANICS AND MANUFACTURERS.

That the remarks of experienced artists and laborers may frequently lead to useful discoveries may be illustrated by the following facts:—"A soap manufacturer remarked that the residuum of his lye, when exhausted of the alkali for which he employed it, produced a corrosion of his copper boiler for which he could not account. He put it into the hands of a scientific chymist for analysis, and the result was the discovery of one of the most singular and important chymical elements, *iodine*. The properties of this, being studied, were found to occur most appositely in illustration and support of a variety of new, curious, and instructive views then gaining ground in chymistry, and thus exercised a marked influence over the whole body of that science. Curiosity was excited; the origin of the new substance was traced to the sea-plants, from whose ashes the principal ingredient of soap is obtained, and ultimately to the sea-water itself It was thence hunted through nature, discovered in salt-mines and springs, and pursued into all bodies which have a marine origin; among the rest, into sponge. A medical practitioner then called to

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mind a reputed remedy for the cure of one of the most grievous and unsightly disorders to which the human species is subject—the *goitre*—which infests the inhabitants of mountainous districts to an extent which, in this favored land, we have happily no experience of, and which was said to have been originally cured by the ashes of burnt sponge. Led by this indication, he tried the effect of iodine on that complaint, and the result established the extraordinary fact that this singular substance, taken as a medicine, acts with the utmost promptitude and energy on goitre, dissipating the largest and most inveterate in a short time, and acting (of course with occasional failures, like all other medicines) as a specific or natural antagonist against that odious deformity. It is thus that any accession to our knowledge of nature is sure, sooner or later, to make itself felt in some practical application, and that a benefit conferred on science, by the casual observation or shrewd remark of even an unscientific or illiterate person, infallibly repays itself with interest, though often in a way that could never have been at first contemplated."

Iodine was *accidentally* discovered (as above stated) in 1812, by M. de Courtois, a manufacturer of saltpetre at Paris, and derived its first illustrations from M. Clement and M. Desormes. Its name literally signifies a *violet color*. Its specific gravity is about 4. It becomes a violet colored *gas* at a temperature below that of boiling water; it combines with the metals, with phosphorus and sulphur, with the alkalis and metallic oxides, and forms a detonating compound with ammonia. Dr. Coindet of Geneva first recommended the use of it, in the form of tincture, for the cure of goitres. Some readers may perhaps require to be informed

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that the goitre is a large fleshy excrescence that grows from the throat, and sometimes increases to an enormous size. The inhabitants of certain parts of Switzerland, especially those in the republic of Valais, are particularly subject to this shocking deformity.

THE BUGLE.

BY GRENVILLE MELLEN.

O, wild, enchanting horn!
Whose music, up the deep and dewy air,
Swells to the clouds, and calls on Echo there,
'Till a new melody is born!

Wake, wake again; the night
Is bending from her throne of Beauty down,
With still stars beaming on her azure crown,
Intense, and eloquently bright!

Night, at its pulseless noon!
When the far voice of waters mourns in song,
And some tired watch-dog, lazily and long,
Barks at the melancholy moon!

Hark! how it sweeps away,
Soaring and dying on the silent sky,
As if some sprite of sound went wandering by,
With lone halloo and roundelay.

Swell, swell in glory out!
Thy tones come pouring on my leaping heart,
And my stirred spirit hears thee with a start,
As boyhood's old remembered shout!

O, have ye heard that peal,
From sleeping city's moon-bathed battlements,
Or from the guarded field and warrior tents,
Like some near breath around ye steal!

Or have ye, in the roar
Of sea, or storm, or battle, heard it rise,

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Shriller than eagle's clamor to the skies,
Where wings and tempests never soar

Go, go; no other sound,
No music, that of air or earth is born,
Can match the mighty music of that horn,
On Midnight's fathomless profound!

SINGULAR PROPERTIES OF THE FIGURE 9.

Multiply 9 by itself, or by any other of the digits, and the figures of the product added together will amount to 9. The component figures of the amount of the multipliers, (viz. 45) when added together, make 9.

The amount of the several products or multiples of 9, (viz. 405) when divided by 9, gives a quotient of 45; and the component figures of either the dividend or quotient added together make 9.

Multiply any row of figures either by nine, or by any one of the products of nine multiplied by one of the digits, as by 18, 27, 36, 45, 54, 63, 72, or 81, and the sum of the figures of the product added together will be divisible by 9.

Multiply the 9 digits in the following order, 1 2 3 4 5 6 7 8 9, by nine, or by any one of the products of nine mentioned in the last paragraph, and the product will come out all in one figure, except the place of tens, which will be an 0, and that figure will be the one which multiplied into 9, supplies the multiplier; that is, if you select 9 as the multiplier, the product will be (except the place of tens) all ones; if you select 18, all twos; if 27, all threes, and so on. Omit the 8 in the multiplicand, and the 0 will also vanish from the product, leaving it all ones, twos, threes, &c. as the case may be.

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NEST OF THE CANARY.

The nest of the canary is built, in its native regions, in the fork of an orange-tree. When kept in a greenhouse in this country, it will make a similar choice, seeming to be pleased with the perfume of the orange flowers, as well as of myrtle. It has been remarked, that the hen canary continues adding to the brim of the nest after she begins to lay, till the time of beginning to hatch, as do the humming birds and several others. Canaries are fond of lining their nests with the hair of deer or rabbits, which, like the chaffinch, they seem to prefer to down.

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CAPTAIN ROSS IN THE NORTHERN REGIONS.

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THE RETURN OF CAPTAIN ROSS.

The news of the safe return of Captain Ross was received both in Great Britain and the United States with unfeigned sensations of joy. The hardy navigator, with his nephew, Commander Ross, and the whole of his party except three, two of whom died on the passage out, and one at a later period, arrived at Hull on the morning of Friday, the 18th of October, 1833.

It was in 1829 that Captain Ross fitted out his expedition to determine the practicability of a new passage, which had been confidently stated to exist, particularly by Prince Regent's Inlet, but in consequence of the loss of the foremast of his vessel, the Victory, he was obliged to refit at Wideford, in Greenland. The accounts of his departure from thence on the 27th July, 1829, formed the last authentic intelligence received of the expedition. By the subsequent details it will be perceived that he was picked up by the Isabelle of Hull,—the very ship—by a singular coincidence, in which he made his first voyage to the Arctic regions.

By Captain Ross's account it appears, that the first season (that of 1829,) was the mildest that had ever been recorded, and the sea was more clear of ice than had been experienced during any preceding voyages. On the 13th of August, Capt. Ross reached the spot where the stores of his majesty's late ship, the Fury, were landed.

"Early in January, 1830," says Captain Ross, "we had the good fortune to establish a friendly

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intercourse with a most interesting consociation of natives, who, being insulated by nature, had never before communicated with strangers; from them we gradually obtained the important information that we had already seen the continent of America, that about forty miles to the S. W. there were two great seas, one to the west, which was divided from that to the east by a narrow strait or neck of land. The verification of this intelligence either way, on which our future operations so materially depended, devolved on Commander Ross, who volunteered his service early in April, and, accompanied by one of the mates, and guided by two of the natives, proceeded to the spot, and found that the north land was connected to the south by two ridges of high land, fifteen miles in breadth, but, taking into account a chain of fresh water lakes, which occupied the valleys between, the dry land which actually separates the two oceans is only five miles. This extraordinary isthmus was subsequently visited by myself, when Commander Ross proceeded minutely to survey the seacoast to the southward of the isthmus leading to the westward, which he succeeded in tracing to the ninety-ninth degree, or to one hundred and fifty miles of Cape Turnagain of Franklin, to which point the land, after leading him into the 70th degree of north latitude, trended directly; during the same journey he also surveyed thirty miles of the adjacent coast, or that to the north of the isthmus, which, by also taking a westerly direction, formed the termination of the western sea into a gulf. The rest of this season was employed in tracing the seacoast south of the isthmus leading to the eastward, which was done so as to leave no doubt that it joined, as the natives had previously informed us, to Ockullee, and the

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land forming Repulse Bay. It was also determined that there was no passage to the westward for thirty miles to the northward of our position.

"This summer, like that of 1818, was beautifully fine, but extremely unfavorable for navigation, and our object being now to try a more northern latitude, we waited with anxiety for the disruption of the ice, but in vain, and our utmost endeavors did not succeed in retracing our steps more than four miles, and it was not until the middle of November that we succeeded in cutting the vessel into a place of security, which we named 'Sheriff's Harbor.' I may here mention that we named the newly-discovered continent to the southward, 'Boothia,' as also the isthmus, the peninsula to the north, and the eastern sea, after my worthy friend, Felix Booth, Esq. the truly patriotic citizen of London, who, in the most disinterested manner, enabled me to equip this expedition in a superior style.

"The last winter was in temperature nearly equal to the mean of what had been experienced on the four preceding voyages, but the winters of 1830 and 1831 set in with a degree of violence hitherto beyond record—the thermometer sunk to ninety-two degrees below the freezing point, and the average of the year was ten degrees below the preceding; but notwithstanding the severity of the summer, we travelled across the country to the west sea by a chain of lakes, thirty miles north of the isthmus, when Commander Ross succeeded in surveying fifty miles more of the coast leading to the northwest, and by tracing the shore to the northward of our position, it was also fully proved that there could be no passage below the seventy-first degree.

"This autumn we succeeded in getting the ves-

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sel only fourteen miles to the northward, as we had not doubled the Eastern Cape, all hope of saving the ship was at an end, and put quite beyond possibility by another very severe winter; and having only provisions to last us to the 1st of June, 1833, disposition were accordingly made to leave the ship in present port, which (after her) was named Victory Harbor. Provisions and fuel being carried forward in the spring, we left the ship on the 28th May, 1832, for Fury Beach, being the only chance left of saving our lives; owing to the very rugged nature of the ice, we were obliged to keep either upon or close to the land, making the circuit of every bay, thus increasing our distance of two hundred miles by nearly one half; and it was not until the first of July that we reached the beach completely exhausted by hunger and fatigue.

"A hut was speedily constructed, and the boats, three of which had been washed off the beach, but providentially driven on shore again, were repaired during this month; and the unusual heavy appearance of the ice afforded us no cheering prospect until the 1st of August, when in three boats we reached the ill-fated spot where the Fury was first driven on shore, and it was not until the first of September we reached Leopold South Island, now established to be the N. E. point of America, in latitude 73, 56, and longitude 90 west. From the summit of the lofty mountain on the promontory we could see Prince Regent's Inlet, Barrow's Strait, and Lancaster Sound, which presented one impenetrable mass of ice, just as I had seen it in 1818. Here we remained in a state of anxiety and suspense which may be easier imagined than described. All our attempts to push through were vain; at length being forced by want of provisions and the

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approach of a very severe winter to return to Fury Beach, where alone there remained wherewith to sustain life, there we arrived on the 7th of October, after a most fatiguing and laborious march, having been obliged to leave our boats at Batty Bay. Our habitation, which consisted of a frame of spars, thirty-two by sixteen feet, covered with canvass, was during the month of November enclosed, and the roof covered with snow, from four to seven feet thick, which being saturated with water when the temperature was fifteen degrees below zero, immediately took the consistency of ice, and thus we actually became the inhabitants of an iceberg during one of the most severe winters hitherto recorded; our sufferings aggravated by want of bedding, clothing, and animal food, need not be dwelt upon. Mr. C. Thomas, the carpenter, was the only man who perished at this beach, but three others, besides one who had lost his foot, were reduced to the last stage of debility, and only thirteen of our number were able to carry provisions in seven journies of sixty-two miles each to Batty Bay.

"We left Fury Beach on the 8th of July, carrying with us three sick men, who were unable to walk, and in six days we reached the boats, where the sick daily recovered. Although the spring was mild, it was not until the 15th August that we had any cheering prospect. A gale from the westward having suddenly opened a lane of water along shore, in two days we reached our former position, and from the mountain we had the satisfaction of seeing clear water across Prince Regent's Inlet, which we crossed on the 17th, and took shelter from a storm twelve miles to the eastward of Cape York. The next day, when the gale abated, we crossed Admiralty Inlet, and were detained six

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days on the coast by a strong N. E. wind. On the 25th we crossed Navy Board Inlet, and on the following morning, to our inexpressible joy, we descried a ship in the offing, becalmed, which proved to be the Isabelle of Hull, the same ship which I commanded in 1818. At noon we reached her, when her enterprising commander, who had in vain searched for us in Prince Regent's Inlet, after giving us three cheers, received us with every demonstration of kindness and hospitality which humanity could dictate. I ought to mention also that Mr. Humphreys, by landing me at Possession Bay, and subsequently on the west coast of Baffin's Bay, afforded me an excellent opportunity of concluding my survey, and of verifying my former chart of that coast."

On the foregoing page, a sketch is given which may convey some idea of the situation of the navigators. The party were not more reduced by their sufferings than might have been expected. They have now recovered from the effects of those sufferings. The circumstance that Captain Ross was rescued by the ship he commanded in 1818, is a curious and happy conclusion of the voyage, the result of which has established, that there is no new (N. W.) passage south of seventy-four degrees.

The true position of the magnetic pole has been discovered, and much valuable information obtained for the improvement of geographical and philosophical knowledge. Captain Ross had a good opportunity of verifying his former survey of the coast of Baffin's Bay, which every master of a Greenland ship can testify to be most correct.

On the whole, it may be truly said, that this expedition has done more than any that preceded it; and let it be remembered that Captain Ross and

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his nephew were volunteers, serving without pay, for the attainment of a great national object, in prosecuting which they have lost their all.

From Hull, Captain Ross proceeded to London, and received the most gratifying testimonials of public approbation of his services.

So incredulous had been the public of the possibility of his having returned in safety, that when the news of it first reached London, it was taken as a hoax, and although a meeting of the subscribers to Captain Back's expedition was convened in order to take measures immediately to recall that gallant and self-devoted individual, Mr. Perry, the Governor of Hudson's Bay Company, in assenting to take the preliminary steps for expediting such recall, yet spoke of the return of Captain Ross as far from certain. Having appeared, however, in person, all doubts were at an end; and orders from the Hudson's Bay Company, have been sent to transmit by express to Captain Back, the gratifying intelligence of the safe return of those, of whom, amidst the discouragements and uncertainties of all others, he had not despaired, and for the chance, desperate as it seemed to most, of rescuing whom, he willingly incurred the risk of much toil and suffering, and the imminent hazard of a lingering and protracted death.

Truly enviable, indeed, will be his feelings, when he hears of the safety of his friend, and finds, moreover that after justly entitling himself to the whole merit of such a sacrifice as his attempt implies, he may be very honorably, and for the most sufficient reasons, exempted from the hardships and perils of farther prosecuting it.

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MANNER OF EATING AMONG THE ANCIENTS.

In ancient times, it was the custom, among the patriarchs and others, frequently to take their meals out of doors. We meet with many instances of this in the gospels, and it is usual among eastern nations in the present day. The regular meals were, dinner a little before noon, and supper in the evening. The latter was the principal meal. The feast of the passover was in the evening.

The Hebrews did not eat with the neighboring nations: we are not told in the Bible when they began to separate themselves in this manner; but it was their custom in Joseph's time, although in that instance it appears to have arisen from objections on the part of the Egyptians. The Jews in our Saviour's time did not eat with the Samaritans, and they objected to our Lord's eating with publicans and sinners. This custom was so strictly observed, that when the Lord was about to extend his church to the Gentiles, he sent an especial vision to St. Peter, to show that it might be discontinued.

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Peter was blamed by the other apostles for eating with Cornelius, and from several passages in the epistles, we find that the early Christians abstained from meat offered unto idols. As these sacrifices were offered at all solemn feasts, and on many occasions of less importance, they were thereby separate from eating with the heathens in general.

It was usual in ancient times, and is still the custom in China, Persia, and many other countries, for one or more of the guests to have a little table or tray placed on the floor, upon which dishes are set separately for them. In India, many persons never eat out of the same dish as others, believing that it would be sinful to do so, and thinking that their dishes, &c. are polluted and spoiled if touched by persons of another religion. If so touched, they break them, as the Jews were to break their earthen vessels when touched by an unclean animal. This assists in explaining the apostle's words: "Touch not, taste not, handle not." Dr. Clark found similar customs among the Turks. He was one night entertained very kindly by a Turk and his family; after leaving the place, the next morning, Dr. C. returned for a book he had left behind, when he found his kind host and all the family employed in breaking and throwing away the earthen-ware plates and dishes, from which his guests had eaten, and purifying the other utensils and articles of furniture by passing them through fire or water.

Elkanah, the father of Samuel, distributed portions of provision to each of his wives separately. It is still the custom in all countries of the east, when there is more than one wife, for each to be separate, as much as the master of the family can afford. When entertaining strangers, as well in

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eating and drinking in general, there appears to have been great plenty, but not much care or delicacy in preparing the provision. It was deemed a mark of favor to send the guests a great deal of any dish; thus the mess or portion which Joseph sent to Benjamin was five times greater than was sent to any other of his brethren. It is an honor to receive any portion from the table of the master of the feast, if he is a great man A modern traveller, who dined in the presence of an eastern king, describes his majesty as tearing a handful of meat from a quarter of lamb, which stood before him, and sending it to his guest as a mark of honor. This custom also prevails in China. Van Braam, the Dutch ambassador, relates that some bones of mutton, with half the meat gnawed off, were sent to him from the table of the emperor, and he was told it was a great honor! Knives and forks never have been used in the east as among us.

THE PET MONKEY AND THE SHIP'S CREW.

I need not dwell on the common-place tricks of a nautical monkey, (observes Captain Hall), as they must be well known to every one; such as catching hold of the end of the sail makers' ball of twine, and paying the whole overboard, hand over hand, from a secure station in the rigging; or his stealing the boatswain's silver call, and letting it drop from the end of the cathead: or his getting into one of the cabin ports, and tearing up the captain's letters, a trick at which even the stately skipper is obliged to laugh.

One of our monkey's grand amusements was to watch some one arranging his clothes in his bag. After the stowage was completed, and every thing

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put carefully away, he would steal round, untie the strings, and, having opened the mouth of the bag, would draw forth in succession every article of dress, first smell of it, then turn it over and over, and lastly, fling it away on the wet deck. It was amusing enough to observe that, all the while he was committing any piece of mischief, he appeared not only to be under the fullest consciousness of guilt, but living under the perfect certainty that he was earning a good sound drubbing for his pains. Still, the pleasure of doing wrong was so strong and habitual within him, that he seemed utterly incapable of resisting the temptation whenever it fell in his way. When occupied in these misdeeds, he continued alternately chattering with terror, and screaming with delight at his own ingenuity, till the enraged owner of the property burst in upon him, hardly more angry with Jacko than with his malicious messmates, who, instead of preventing, rather encouraged the pillage.

All this was innocent, however, compared to the tricks which the blue jackets taught him to play upon the jolly marines. How they set about this laudable piece of instruction, I know not: but the antipathy which they established in Jacko's breast against the red coats was something far beyond ordinary prejudice, and in its consequences partook more of the interminable war between cat and dog.

The monkey, who entered with all the zeal of a hot partisan into the designs of the blues, showed no mercy to the red faction, against whom he had not, in fact, the slightest shadow of a real quarrel. As that trifling circumstance, however, seemed, as in graver cases of quarrel, only to aggravate the hostility, every new day brought a new mode of

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attack upon the unhappy soldiers, who were never safe. At first he merely chattered, or grinned contemptuously at them; or, at worst, snapped up his heels, soiled their fine pipe-clayed trousers, or pulled the cartridges out of their cartouch-boxes, and scattered the powder over the decks, feats for which his back was sure to smart under the ratan of the indignant sergeant, to whom the "party" made their complaint. Upon these occasions, the sailors laughed so heartily at their friend Jacko, as he placed his hands behind him, and, in an agony of rage and pain, rubbed the wounded part, smarting under the sergeant's chastisement, that, if he could only have reasoned the matter like a statesman, he would soon have distrusted his advantage in this offensive, but not defensive, alliance with the Johnnies against the Jollies. Sometimes, indeed, he appeared to be quite sensible of his absurd position, caned by his enemy and ridiculed by his friends, in whose cause he was suffering. On these occasions he often made a run, open-mouthed, at the sailors; in return for which mutinous proceeding he was sure to get a smart rap over the nose from his own party, which more than counterpoised the anguish at the other extremity of his person, giving ludicrous occupation to both his hands, and redoubling the shouts of laughter at his expense. In short, poor St. Jago literally got what is currently called monkey's allowance, viz. "more kicks than halfpence."

In process of time, as Mr. Monkey, by dint of that bitter monitor, experience, gained higher knowledge in the art of marine warfare and ship diplomacy, he became much more formidable in his attacks on the "corps," and generally contrived to keep himself well beyond the reach of

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the sergeant's merciless ratan. One of the favorite pranks of the sailors was to place him near the break of the forecastle, with a handspike, taken from the bow-chaser gun, in his paws. It was quite as much as he could carry, and far more than he could use as a missile against the royals; but he was soon instructed in a method of employing it, which always grievously annoyed the enemy. Theoretically speaking, I presume poor Jacko knew no more of the laws of gravitation, when applying it to the annoyance of the marines, than his friends the seamen did of centrifugal action, when swinging round the hand-lead to gain soundings by pitching it far forward into the water; but without such scientific knowledge, both the monkey and his wicked associates knew very well that if a handspike were held across the top of the forecastle ladder, and let go when a person was about half way down it, the heels of the said individual would be sure to bring up or stop the bar. The unhappy marine, therefore, who happened to be descending the steps when Jacko let his handspike fall, generally got the skin taken off his heels, or his instep, according as his rear or his front was turned towards the foe. The instant Jacko let go his hold and the law of gravitation began to act, so that the handspike was heard to rattle down the ladder, off he jumped to the bow of the barge, overlooking the spot, and there sat, with his neck stretched out, his eyes starting from his head, and his lips drawn back, till his teeth, displayed from ear to ear, rapped against one another like a pair of castanets in a bolero, under the influence of the most ecstatic alarm, curiously mixed up with the joy of complete success. The poor wounded Gulpin, in the meantime, rubbed his ankles, as

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he fired off a volley of imprecations, the only effect of which was to increase the number of his audience, grinning and laughing in chorus with the terrified mischief-monger.

ANCIENT BRITISH COSTUME.

After the conquest of England by the Romans, the Britons seem to have adopted the costume of their subduers with considerable taste and dexterity. A kind of mantle, in the fashion of a Scottish plaid, took the place of the cloak of skins, which it somewhat resembled in shape.

This, by no means inelegant, drapery, was fastened on the shoulder by a clasp, either of gems

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or of plain metal, or perhaps only by a small wooden skewer—according to the rank of the wearer. Beneath this mantle was a vest, or tunic, with sleeves reaching either to the wrist or elbow. A sort of trouser completed the costume; but we do not find any trace of shoes, nor even of buskins. The feet were usually bare, or covered only with a rough piece of skin.

IRON.

In few instances do we perceive the concern of Providence for the wants of mortals more fully exemplified, than in the abundant distribution of this substance over the face of the earth, not only in a metallic state, but also in an infinite variety of combinations: from which source are derived many articles of almost indispensable use in our arts and manufactures, as plumbago, commonly called black-lead, (a combination of iron with charcoal,) Prussian blue, green vitriol, &c.; but at present we must only take into consideration the simple metal.

Iron is seldom found in a pure metallic state; but its ores are diffused throughout nature in greater abundance than those of other metals, oftentimes combined with them, and sometimes in the state of an oxide, *i. e.* rust. In this state occurs the Swedish iron ore, which produces such excellent metal. In order to reduce the ore into cast-iron, in some manufactories, it is broken into small pieces, and mixed with lime, or some substance capable of promoting its fusion. It is then thrown into the furnace, together with a quantity of coke or charcoal; where, after being submitted

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for some time to a most intense heat, the reduced metal descends through the fuel, and collects at the bottom, whence it is let out, and forms pigs of cast-iron. In this state it is employed in the fabrication of various kinds of machinery and utensils.

Cast-iron acquires carbon from the charcoal or coke used in its reduction, and originally contains oxygen and other adventitious substances, which cause its brittleness and render it fusible, though with some difficulty. In order to deprive it of these, it is kept in a state of fusion for a considerable time, and repeatedly stirred; during which process, the carbon and oxygen uniting, pass off in the state of carbonic-acid gas or fixed air. At length, having become thick, it is taken from the furnace, and submitted to the action of the hammer, or the regular pressure of large steel rollers, by which the remaining impurities are forced out, and the metal is rendered malleable, ductile, and nearly infusible. Iron in this state is called bar or wrought iron.

Iron, by the above process, being divested of charcoal, must again absorb a small portion of pure carbon, in order to be converted into steel. This is effected by submitting good iron to an intense heat, for several hours, in conjunction with carbonaceous matter, such as charcoal, carbonate of lime, &c. Good steel contains about one part of carbon in two hundred of iron.

It may be remarked, that, of the metals in common use, (platinum excepted) iron alone possesses the property of welding. Innumerable are the advantages which we derive from this peculiar quality, by which, without fusion, merely by heating, iron is moulded into the variety of forms, in which it is every where exhibited to our view.

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Iron possesses likewise the property of being attracted by the magnet, and of becoming itself magnetic. To this property we are indebted for the mariner's compass—an instrument, by which man is enabled to steer his course towards any part of the globe, with the greatest accuracy and certainty.

Contrary to the prejudiced opinion of the ancients, who supposed that iron was poisonous, and that wounds, inflicted with instruments made of this metal, healed with difficulty, it seems that its effects on the animal economy are very beneficial, both in medicinal preparations, and in its state of natural solution in chalybeate waters. Indeed, of all metals, this is the most important; since there is no other, wherein are contained, at the same time, so many useful properties; none which can be applied to such a variety of uses; and, finally, none which exists in such abundance, or in so many different states, for it pervades all nature, is found in vegetables, and even in animal fluids.

It may not be improper to state here, that the article, known in commerce by the name of *tinned plate*, is not tin, as some suppose, but iron plates, which, having undergone certain chemical preparations, are immersed in melted tin, which not only adheres to the surface, but even partly penetrates the plate, and gives it a very brilliant appearance.

OF THE GENEROSITY OF THE LION.

Of late years, the truth of the accounts, which have been so long current, respecting the generous disposition of the Lion, have been called in question. Several travellers, in their accounts of Asia and Africa, describe him as of a more rapacious and sanguinary disposition than had formerly been

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supposed, although few of them have had the opportunity to make him a particular object of their attention. A circumstance that occurred not long since in Vienna, seems, however, to confirm the more ancient accounts.

In the year 1791, at which period the custom of baiting wild beasts still existed in that city, a combat was to be exhibited between a Lion and a number of

large dogs. As soon as the noble animal made his appearance, four large bull-dogs were turned loose upon him; three of which, however, as soon as they came near him, took fright and ran away. One only had courage to remain, and make the attack. The Lion, however, without rising from the ground upon which he was lying, showed him, by a single stroke with his paw, how greatly he was his superior in strength; for the dog was

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instantly stretched motionless on the ground. The Lion drew him towards him, and laid his fore-paws upon him in such a manner, that only a small part of his body could be seen. Every one imagined that the dog was dead, and that the Lion would soon rise and devour him. But they were mistaken. The dog began to move, and struggled to get loose, which the Lion permitted him to do. He seemed merely to have warned him not to meddle with him again. But when the dog attempted to run away, and had already got over half the enclosure, the Lion's indignation seemed to be excited. He sprang from the ground, and in two leaps reached the fugitive, who had just got as far as the paling, and was whining to have it opened for him to escape. The enraged and flying animal had called the instinctive propensity of the monarch of the forest into action; the defenceless enemy now excited his pity; for the generous Lion stepped a few paces backward, and looked quietly on, while a small door was opened to let the dog out of the enclosure.

This unequivocal trait of generosity moved every spectator. A shout of applause resounded throughout the assembly, who had enjoyed a satisfaction of a description far superior to what they had expected.

The Lion is said to be long lived, although the precise period of his existence is perhaps unknown. By Buffon, he is limited to about twenty-five years, but it is certain that his life is of a much longer duration. The great Lion, called Pompey, which died in the Tower, A. D. 1760, was known to have been there above seventy years, and another brought from Africa, died in the same place at the age of sixty-three.

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CHILDHOOD AND HIS VISITERS.

Once on a time when sunny May
  Was kissing at the April showers,
I saw fair Childhood hard at play
  Upon a bank of blushing flowers;
Happy,—he knew not whence or how;
  And smiling,—who could choose but love him?
For not more glad than Childhood's brow,
  Was the blue heaven that breathed above him.

Old Time, in most appalling wrath,
  That valley's green repose invaded;
The brooks grew dry upon his path,
  The birds were mute, the lilies faded;
But Time so swiftly winged his flight
  In haste a Grecian tomb to batter,
That Childhood watched his paper kite,
  And knew just nothing of the matter.

With curling lip, and glancing eye,
  Guilt gazed upon the scene a minute,
But Childhood's glance of purity,
  Had such a holy spell within it,
That the dark demon to the air
  Spread forth again his baffled pinion,
And hid his envy and despair,
  Self tortured, in his own dominion.

Then stepped a gloomy phantom up,
  Pale, cypress crowned, Night's awful daughter,
And proffered him a fearful cup,
  Full to the brim with water;
Poor Childhood bade her tell her name,
  And when the beldame muttered "Sorrow,"
He said—"Don't interrupt my game,
  I'll taste it, if I must, to-morrow."

The Muse of Pindus thither came,
  And wooed him with the softest numbers
That ever scattered wealth and fame,

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Upon a youthful poet's slumbers;
Though sweet the music of the lay,
To Childhood it was all a riddle,
And, "Oh," he cried, "do send away,
That noisy woman with the fiddle."

Then Wisdom stole his bat and ball,
And taught him, with most sage endeavor,
Why bubbles rise and acorns fall,
And why no toy may last for ever;
She talked of all the wondrous laws,
Which Nature's open book discloses,
And Childhood ere she made a pause,
Was fast asleep among the roses.

Sleep on, sleep on!—Oh Manhood's dreams,
Are all of earthly pain or pleasure,
Of Glory's toils, Ambition's schemes,
Of cherished love, or hoarded treasure:
But to the couch where Childhood lies,
A more delicious trance is given,
Lit up by rays from Seraph eyes,
And glimpses of remembered heaven!

JUST JUDGMENT.

A GOOD JUDGE, AND A GOOD JURY.

It is of most essential importance to the due administration of justice that juries should be sensible of their own dignity; and, when occasion requires, that they should not implicitly and servilely bow to the opinion of any judge, however high he may be held in estimation. An instance of the beneficial result of a jury asserting, in a respectful manner, the privilege of having an opinion of their own, occurred not very long ago.

Two men were indicted for a burglary: after the counsel for the prosecution had opened, the amia-

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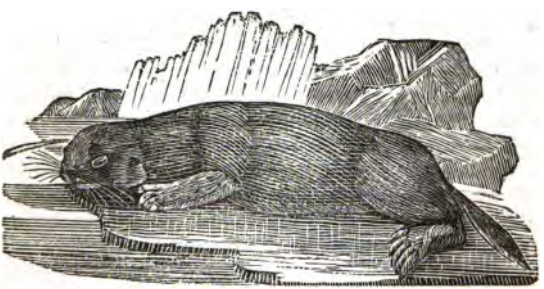
ble and learned judge who presided, addressing the jury, said, "Gentlemen, there does not appear to me any probability that a case of burglary can be made out against the prisoners, it is, therefore, needless to occupy your time any further." The jury having, however, conferred for a short time, the foreman replied, "With perfect deference to your lordship's opinion, we should rather prefer hearing the evidence." To this his lordship readily assented: the case went on, and the guilt of the prisoners was proved beyond the possibility of a doubt. After the verdict was returned, the learned judge said, "Well, gentlemen of the jury, I will not say that you are better *lawyers* than I am, but I am quite sure that in the present instance you have proved yourselves to be better *judges*."



THE SEA OTTER.

The fur of the sea otter is thick and long, and of a beautiful shining black color, but it is sometimes, though rarely, of a silvery hue; the legs are thick and short; the toes joined by a web; the hind feet are like those of a seal. The total length from the

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nose to the tail is four feet two inches; the tail is flat, thirteen inches long, and pointed at the extremity. The largest sized animals of this species weigh about eighty pounds.

The sea otter is a remarkably harmless animal, and most affectionately fond of its young; they have been known to pine to death for the loss of their offspring, and even to die on the spot from whence they have been taken away. Before the young can swim, the old animals carry them in their paws, and support them in the water lying upon their backs.

The sea otter can swim in various positions—on its back, sides, and even perpendicularly, and are excessively sportive in the water. It frequents shallow pools which abound in sea weeds, and feeds on crabs, lobsters, and other marine animals. They breed but once a year, and only produce but one at a time, which the female suckles and attends with great assiduity for nearly a year.

Vast numbers of these animals inhabit the coasts of Kamtschatka, and numerous islands contiguous to it, as well as the opposite coasts of America; they are also found on the larger South American islands. Their skins are of great value, and have long formed a considerable article of export from Russia. They dispose of them to the Chinese at the rate of seventy or a hundred rubles each, and receive in return some of their most valuable commodities.

ACCOUNT OF THE BEE-EATER OF SELBORNE, HAMPSHIRE.

We had in this village, more than twenty years ago, an idiot boy, whom I well remember, who, from a child, showed a strong propensity for bees:

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they were his food, his amusement, his sole object; and as people of this cast have seldom more than one point in view, so this lad exerted all his few faculties on this one pursuit. In the winter he dosed away his time, within his father's house, by the fireside, in a kind of torpid state, seldom departing from the chimney-corner; but in the summer he was all alert, and in quest of his game in the fields and on sunny banks. Honey bees, humble bees, and wasps, were his prey, wherever he found them: he had no apprehensions from their stings, but would seize them *nudis manibus*, and at once disarm them of their weapons, and suck their bodies for the sake of their honey-bags. Sometimes he would fill his bosom between his shirt and his skin with a number of these captives; and sometimes would confine them in bottles. He was a very *merops apiaster*, or *bee-bird*, and very injurious to men that kept bees; for he would slide into their bee-gardens, and, sitting down before the stools, would rap with his finger on the hives, and so take the bees as they came out. He has been known to overturn hives for the sake of honey, of which he was passionately fond.

Where metheglin was making, he would linger round the tubs and vessels, begging a draught of what he called *bee-wine*. As he ran about, he used to make a humming noise with his lips, resembling the buzzing of bees. This lad was lean and sallow, and of a cadaverous complexion; and, except in his favorite pursuit, in which he was wonderfully adroit, discovered no manner of understanding. Had his capacity been better, and directed to the same object, he had perhaps abated much of our wonder at the feats of a more modern exhibiter of bees; and we may justly say of him now,

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"Thou,
Had thy presiding star propitious shone,
Shouldst *Wildman* be."

When a tall youth, he was removed from hence to a distant village, where he died, as I understand, before he arrived at manhood.—*Rev. Gilbert White.*

Bilbocquet.—In 1585, Henry III. of France diverted himself, while passing through the streets of Paris, by playing with a "bilbocquet," a cup and ball. The dukes d'Epernon and de Joyeuse accompanied him in his childish frolic, which, by this example, became so general, that gentlemen, pages, lackeys, and all sorts of people, great and small, made the management of the "bilbocquet" a serious and perpetual study. The same king traversed his capital with a basket hanging by a girdle from his neck, out of which peeped the heads of half a dozen puppies.

A Soldier's Age.—Napoleon, in his Italian successes, took a Hungarian battalion prisoners. The colonel, an old man, complained bitterly of the French mode of fighting—by rapid and desultory attacks, on the flank, the rear, the lines of communication, &c., concluding by saying, "that he fought in the army of Maria Theresa."

"You must be *old?*" said Napoleon.

"Yes, I am either sixty or seventy."

"Why, colonel, you have certainly lived long enough to know how to count years a little more closely?"

"General," said the Hungarian, "I reckon my money, my shirts, and my horses; but as for my years, I know that nobody will want to steal them, and that I shall never lose one of them!"

Gardens in Ships. To sow in the temperate zone, and reap between the tropics, is a somewhat singular thing. Yet it is constantly done; for our great East India ships, in imitation of the Dutch, who first introduced the practice, have small salad gardens in flat wooden boxes on their poops, where the seed, acted upon by a heat increasing daily, shoots up in a surprisingly rapid manner. In these gardens the number of crops in a year are more numerous than in any spot on earth, for the gardeners, if so minded, can command almost any temperature.

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ANOTHER YEAR HAS GONE.

A year has passed away, and another has begun its flight. Let us take advantage of the moment, to cast a backward glance, and consider a few things suggested by the occasion.

In the first place, let us remember that a year is gone; a year—a very considerable portion of our life, has passed irrecoverably down into the gulf of by-gone ages. We are so much nearer the goal to which our race tends: we have so much less of that precious time which is allotted for the discharge of the duties assigned to us, and to make up our account for the great reckoning at our entrance into another life. Regarded then as a mere abridgment of our span of years, it is a serious thing and may well awaken deep emotions in our hearts.

But the nature of our emotions, in reflecting upon the lapse of time, must depend upon the manner in which we have used it. Are we better? are we wiser? have we laid up a store of good memories —recollections of good deeds done—of injuries forgiven, of charities performed, of efforts to alleviate distress, to soften grief, to break the force of misfortune and turn aside the edge of disappointment? Have we sought to enlarge the boundaries of human knowledge, to disseminate principles of religion and morality, to set examples of truth, honor and honesty, and to weave mankind together, into one happy family, by the exercise of kind and gentle sympathies ?

Have we done these things?—then, the lapse of

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time is no loss to us; on the contrary, it has resulted in positive gain. The spring, the summer and the autumn, though they have passed away to the husbandman, have left his garners full, and we in like manner have laid up a rich harvest for the future; a harvest, not indeed, of earthly fruits, but of those intellectual and moral stores, which are as essential to the welfare of the spirit within, as corn and wine to the outward man.

But if our year has been spent in mere selfishness;—if we have taken thought only for ourselves; if we have put forth no kindly efforts for the great family around us; if we have indeed gone farther, and indulged in malice, or wantonly injured others in their feelings or in their estate; if we have wounded by falsehood, or led astray by misrepresentation; if we have exerted our influence for the mere cause of a sect or a party; if we have inculcated by example or precept, either bigotry or illiberality, or in any way used our power to draw others astray from the path of love, charity or truth, then the departed year is an irredeemable loss. It has accumulated the great work we have to do, and has seriously abridged the space in which it must be done. It has doubled our task, while it has diminished our strength, incumbered our limbs, and shortened the day which precedes that night in which no man can work.

Let us draw a serious lesson from these hints. Let us remember that every hour that passes is full of moment: that time spent for ourselves, though it may be necessary, is in some degree like water spilled upon the ground, which cannot be gathered up; while time spent in doing good to others, is like the farmer's seed, sown in good time, and in a good soil, and sure to produce an abundant return.

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Let us remember too, that time spent in doing ill offices to others—in wicked or wanton injuries to the heart, or the purse of our fellow men, is like putting poison into the cup which we must ourselves drink.

Let us not be misunderstood; we do not mean to say that any man is bound to neglect his own affairs, or consider them secondary to the charity due to others. On the contrary, we esteem an industrious, persevering pursuit of the good things of this life, by honorable and honest means, worthy of praise. We believe the best way to future happiness, is straight forward on the plain turnpike that leads to earthly happiness. But we mean to affirm, and we would fain urge upon all within the reach of our humble influence, the doctrine, that in doing good to those who are travelling the same journey with ourselves, in cheering and helping them on their way is the wisest and surest, and shortest path to our present and permanent peace.

Perseverance.—"I recollect," says Sir Jonah Barrington, "in Queen's County, to have seen a Mr. Clerk, who had been a working carpenter, and when making a bench for the session justices at the Court House, was laughed at for taking peculiar pains in planing and smoothing the seat of it. He smiling observed, that he did so to make it easy for himself, as he was resolved he would never die till he had a right to sit thereupon; and he kept his word. He was an industrious man—honest, respectable, and kind-hearted. He succeeded in all his efforts to accumulate an independence; he did accumulate it, and uprightly. His character kept pace with the increase of his property, and he lived to sit as a magistrate upon that very bench that he sawed and planed."

Do as you wish to be done by. Follow this rule, and you will need no force to keep you honest.

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HUNTERS IN A HOWDAH.

Although the elephant is not a native of Persia, at the present day, there is tolerable evidence that he was once employed in that country both in war and the chase. On an ancient arch, described by Sir R. K. Porter, are representations in bas-relief, of a boar-hunt, in which some of the riders are mounted on horses, and others on elephants, which are plunging on every side through the marshy bushes.

The elephant is invariably employed in India in hunting the tiger. His delicate scent, his strength to make his way through the thickest covers, his sagacity, and especially his great stature, by which the hunter is lifted out of danger, render him peculiarly fitted for such a work. Horses cannot be brought to follow the track of a tiger; and camels are unable to defend themselves if attacked by the ferocious beast. The hunting party is generally numerous; and the sportsmen, seated in their howdahs, fearlessly proceed into the jungle, well-armed for the expected combat.

PERSEVERANCE IN DIFFICULTIES.

We select the following from the delightful pages of "the Pursuit of Knowledge under Difficulties," published by the Society for the Diffusion of Use-

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ful Knowledge, as "a most extraordinary instance of literary industry and perseverance;" and to urge upon our young friends the importance of never giving way to trifles, either in their literary pursuits, or in the acquisition of any branch of science or art, to which their taste might lead them.

The Rev. William Davy, A. B. was born in 1743, near Chudleigh in Devonshire, England, where his father resided on a small farm, his own freehold. From a very early age he gave proofs of a mechanical genius, and when only eight years old, he cut out with a knife and put together the parts of a small mill, after the model of one that was then building in the neighborhood, the progress made in constructing which he used to observe narrowly every day, while he proceeded with equal regularity in the completion of his own little work. When the large mill was finished, it was found not to work exactly as it ought to have done, and the defect at first eluded the detection even of the builder. It is said, that while they were endeavoring to ascertain what was wrong, the young self-taught architect made his appearance, and observing that his mill went perfectly well, pointed out after an examination of a few minutes, both the defect and the remedy.

Being intended for the Church, he was placed at the Exeter Grammar School; and here he distinguished himself by his proficiency in classical learning, while he still retained his early attachment to mechanical pursuits, and exercised his talents in the construction of several curious and ingenious articles. At the age of eighteen he entered at Oxford, where he took the degree of A. B. at the usual time. It was during his residence at the University that he conceived the idea of compiling a system

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of divinity, to consist of selections from the best writers, and began to collect, in a common place book, such passages as he thought would suit his purpose. On leaving college, he was ordained to the curacy of Moreton, in the diocese of Exeter, and not long after he removed to the adjoining curacy of Lustleigh, with a salary of forty pounds a year. In the year 1786, he published, by subscription, six volumes of sermons by way of introduction to his intended work; but this proved an unfortunate speculation, many of the subscribers forgetting to pay for their copies, and he remained in consequence, indebted to his printer above a hundred pounds. This bad success, however, did not discourage him: he pursued his literary researches and completed the work. But when his manuscript was finished, he found that from its extent, it would cost two thousand pounds to get it printed. In these circumstances, he again contemplated publication by subscription, and issued his proposals accordingly; but the names he collected were too few to induce any bookseller to risk the expense of an impression of the work. Determined not to be defrauded of the honors of authorship, Mr. Davy now resolved to become a printer himself. So, having constructed his own press, and purchased from a printer, at Exeter, a quantity of worn and cast-off types, he commenced operations, having no one to assist him except his female servant, and having of course to perform alternately the offices of compositor and pressman. Yet in this manner did the ingenious and persevering man, sustained by the anticipation of the literary fame awaiting him, proceed until he had printed off forty copies of the first three hundred pages, his press only permitting him to do a single page at a time. Confident that he

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had now produced so ample a specimen of the work as would be certain to secure for it the general patronage of the learned, he here suspended his labors for awhile; and having forwarded copies to the Royal Society, the universities, certain of the bishops, and the editors of the principal reviews, waited with eager expectation for the notice and assistance which he conceived himself sure of receiving from some of these quarters. He waited, however, in vain; the looked-for encouragement came not. Still, although thus a second time disappointed, he was not to be driven from his purpose, but returned with unabated courage to his neglected labors. He no doubt thought that posterity would repair the injustice of his contemporaries.

In one respect, however, he determined to alter his plan. His presents to the bishops, critics, and learned bodies, had cost him twenty-six of his forty copies; and for the completion of these, so thanklessly received, he naturally enough resolved that he would give himself no farther trouble, but limit the impression of the remainder of the work, so as merely to complete the fourteen copies which he had reserved, in this way saving both his labor and his paper. And he had at last, after thirteen years of unremitting toil, the gratification of bringing his extraordinary undertaking to a conclusion. The book, when finished, the reader will be astonished to learn, extended to no fewer than twenty-six volumes 8vo., of nearly five hundred pages each! In a like spirit of independence he next bound all the fourteen copies with his own hands; after which he proceeded in person to London, and deposited one in each of the principal public libraries there. We may smile at so preposterous a dedication of the labors of a life-time as this; but, at least, the pow-

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er of extraordinary perseverance was not wanting here, nor the capability of being excited to arduous exertion, and long sustained under it, by those motives that act most strongly upon the noblest natures—the consciousness of honorable pursuit, and a trust in the verdict of posterity. It is true this temper of mind might have been more wisely exercised; and the patience, ingenuity, and toil, which were expended upon a performance of no great use in itself, bestowed upon something better fitted to benefit both the zealous laborer and his fellow-men. Yet this consideration does not entitle us to refuse our admiration to so rare an example of the unwearied and inflexible prosecution of an object, in the absence of all those vulgar encouragements which are generally believed and felt to be so indispensable.

DEATH.

BY MISS CAROLINE BOWLES.

Come not in terrors clad, to claim
An unresisting prey;
Come like an evening shadow Death!
So stealthily! so silently!
And shut mine eyes, and steal my breath:
Then willingly—Oh! willingly
With thee I'll go away.

What need to clutch with iron grasp,
What gentlest touch may take?
What need with aspect dark to scare!
So awfully! so terribly!
The wearied soul would hardly care,—
Called quietly—called tenderly,—
From thy dread power to break!

'T is not as when thou markest out
The young, the gay, the blest,

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The loved, the loving—they who dream
So happily! so hopefully!
Then harsh thy kindest call may seem,
And shrinkingly—reluctantly,
The summoned may obey.

But I have drank enough of life,
(The cup assign'd to me
Dashed with a little sweet at best,
So scantily! so scantily!)
To know full well that all the rest,
More bitterly—more bitterly
Drugged to the last will be.

And I may live to pain some heart
That kindly cares for me,—
To pain, but not to bless. O Death;
Come quietly—come lovingly
And shut mine eyes and steal my breath,
Then willingly—oh! willingly
I'll go away with thee.

TORTOISE-SHELL.

The following singularly barbarous process for obtaining the tortoise-shell is abstracted from an Indian newspaper, called the Singapore Chronicle:—This highly-prized aquatic production, when caught by the Eastern islanders, is suspended over a fire, kindled immediately after its capture, until such time as the effect of the heat loosens the shell to such a degree that it can be removed with the greatest ease. The animal, now stripped and defenceless, is set at liberty, to re-enter its native element. If caught in the ensuing season, or at any subsequent period, it is asserted that the unhappy animal is subjected to a second ordeal of fire, rewarding its capturers this time, however, with a very thin shell. This, if true, shows more policy and skill than tenderness in the method thus adopted by the islanders; it is a questionless proof, too, of tenacity of life in the animal, and must further be accounted a very singlar fact in natural history.

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AN ULTRA-MARINER.

According to father Feyjoo, in the month of June, 1674, some young men were walking by the seaside in Bilboa, when one of them, named Francis de la Vega, of about fifteen years of age, suddenly leaped into the sea, and disappeared presently. His companions, after waiting some time, and he not returning, made the event public, and sent an account of it to De la Vega's mother at Lierganès, a small town in the archbishopric of Burgos. At first she discredited his death, but his absence occasioned her fond doubts to vanish, and she mourned his untimely loss.

About five years afterwards some fishermen, in the environs of Cadiz, perceived the figure of a man sometimes swimming, and sometimes plunging under the water. On the next day they saw the same, and mentioned it as a very singular circumstance to several people. They threw their nets, and bating the swimmer with some pieces of bread, they at length caught the object of their attention, which to their astonishment they found to be a well-formed man. They put several questions to him in various languages, but he answered none. They then took him to the convent of St. Francis, where he was exorcised, thinking he might be possessed by some evil spirit. The exorcism was as useless as the questions. At length, after some days, he pronounced the word Lierganès. It happened that a person belonging to that town was present when he uttered the name, as was also the secretary of the Inquisition, who wrote to his correspondent at Lierganès, relating the particulars, and instituting inquiries relative to this very extraordinary man; and he received an account of the young man who had disappeared in the manner before related.

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On this information, it was determined that the marine man should be sent to Lierganès, and a Franciscan friar, who was obliged to go there on other business, undertook to conduct him the following year. When they came within a quarter of a league of the town, the friar ordered the young man to go before and show him the way. He made no answer, but led the friar to the widow De la Vega's house. She recollected him instantly, and embraced him, cried out, "This is my son, that I lost at Bilboa!" Two of his brothers who were present also knew him immediately, and embraced him with equal tenderness. He, however, did not evince the least sensibility, or the smallest degree of surprise. He spoke no more at Lierganès than at Cadiz, nor could any thing be obtained from him relative to his adventure. He had entirely forgotten his native language, except the words *pan, vino, tabaco*, "bread, wine, tobacco;" and these he uttered indiscriminately and without application. They asked him if he would have either of these articles; he could make no reply.

For several days together he would eat large quantities of bread, and for as many days following he would not take the least food of any kind. If he was directed to do any thing, he would execute the commission very properly, but without speaking a word: he would carry a letter to where it was addressed, and bring an answer back in writing. He was sent one day with a letter to St. Ander; to get there it was necessary to cross the river at Padrenna, which is more than a league wide in that spot; not finding a boat in which he could cross it, he threw himself in, swam over, and delivered the letter as directed.

At this time Francis de la Vega was nearly six

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feet in height, and well formed, with a fair skin, and red hair as short as a new-born infant's. He always went barefooted, and had scarcely any nails either on his hands or feet. He never dressed himself but when he was told to do it. The same with eating; what was offered to him he accepted, but he never asked for food.

In this way he remained at his mother's nine years, when he again disappeared, without any apparent cause, and no one knew how. It may be supposed, however, that the motive of feeling which induced his first disappearance influenced the second. Some time afterwards it was reported that an inhabitant of Lierganès again saw Francis de la Vega in some port of Asturias; but this was never confirmed.

When this very singular man was first taken out of the sea at Cadiz, it is said that his body was entirely covered with scales, but they fell off soon after his coming out of the water. They also add, hat different parts of his body were as hard as shagreen.

Father Feyjoo adds many philosophical reflections on the existence of this phenomenon, and on the means by which a man may be enabled to live at the bottom of the sea. He observes that if Francis de la Vega had preserved his reason and the use of speech, he would have given us more instruction and information in marine affairs, than all the naturalists combined.

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THE METEOR OF 1807.

The above engraving is intended to represent the appearance of an extraordinary meteor, which was seen in Connecticut, on the 14th of December, 1807, and exploded with several discharges. From the observations made at the different places where this meteor was witnessed, an eminent mathematician, Dr. Bowditch, formed an estimate of its height, direction, velocity and magnitude. From this estimate we learn, that the course of the meteor was about S. 7° W. in a direction nearly parallel to the surface of the earth, and at the height of eighteen miles. It passed over a space of more than one hundred and seven miles while visible at Rutland and Weston, and this time was by estimation about thirty seconds, therefore the velocity of the meteor probably exceeded three miles per second, which is fourteen times as swift as the motion of sound, and nearly as great, as the velocity of a satellite, revolving about the earth at the same distance.

At the time of the first appearance of the meteor at Weston, it was one hundred and thirteen miles distant from that place, nearly in a north direction; it was then but little elevated above the horizon; at the time of explosion, near the zenith of Weston, it was only twenty miles distant from the observer; at the same moment it could have been seen at Wenham, at the distance of one hundred and sixty-seven miles, and this is the greatest distance at which it was seen.

Some of the observers supposed the meteor to have appeared as large as the moon when full, others estimated it at one half, or one quarter of that magnitude. The real diameter of the meteor

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resulting from the greatest of these estimates would exceed a mile. This estimate exceeds by far the weight of the whole mass that fell near Weston, which, by the accounts published does not appear to have been greater than half a ton, and would not form a sphere of two feet diameter of the same specific gravity as the stone. A sphere of this diameter, seen at the distance of the meteor from Wenham, would hardly be visible without the assistance of a telescope, since its apparent diameter would not exceed two thirds of a second. These facts seem to favor the opinion, that part of the mass continued on its course without falling to the earth near Weston.

As it is but within a few years, that observations of these meteors have been carefully made, we have not yet sufficient data for a well-grounded theory of their nature and origin: none that has yet been proposed is free from difficulties. The greatness of the mass of the Weston meteor does not accord, either with the supposition of its having been formed in our atmosphere, or projected from a volcano of the earth or moon; and the striking uniformity of all the masses that have fallen at different places and times (which indicates a common origin) does not, if we reason from the analogy of the planetary system, altogether agree with the supposition, that such bodies are satellites of the earth.

The meteor of 1807 was observed about a quarter past six on Monday morning. The day had just dawned, and there was little light except from the moon, which was just setting. It seemed to be half the diameter of the full moon; and passed, like a globe of fire, across the northern margin of the sky. It passed behind some clouds, and when it came out it flashed like heat lightning. It had a train

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of light, and appeared like a burning firebrand carried against the wind. It continued in sight about half a minute, and, in about an equal space after it faded, three loud and distinct reports, like those of a four pounder near at hand, were heard. Then followed a quick succession of smaller reports, seeming like what soldiers call a running fire. The appearance of the meteor was as if it took three successive throes, or leaps, and at eash explosion a rushing of stones was heard through the air, some of which struck the ground with a heavy fall.

The first fall was in the town of Huntington, near the house of Mr. Merwin Burr. He was standing in the road, in front of his house, when the stone fell, and struck a rock of granite about fifty feet from him, with a loud noise. The rock was stained a dark lead color, and the stone was principally shivered into very small fragments, which were thrown around to a distance of twenty feet. The largest piece was about the size of a goose egg, and was still warm.

The stones of the second explosion fell about five miles distant, near Mr. William Prince's residence, in Weston. He and his family were in bed, when they heard the explosion, and also heard a heavy body fall to the earth. They afterwards found a hole in the earth, about twenty-five feet from the house, like a newly dug post-hole, about one foot in diameter, and two feet deep, in which they found a meteoric stone buried, which weighed thirty-five pounds. Another mass fell half a mile distant, upon a rock, which it split in two, and was itself shivered to pieces. Another piece, weighing thirteen pounds, fell half a mile to the northeast, into a ploughed field.

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At the last explosion, a mass of stone fell in a field belonging to Mr. Elijah Seely, about thirty rods from his house. This stone falling on a ledge, was shivered to pieces. It ploughed up a large portion of the ground, and scattered the earth and stones to the distance of fifty or a hundred feet. Some cattle that were near were very much frightened, and jumped into an enclosure. It was concluded that this last stone, before being broken, must have weighed about two hundred weight. These stones were all of a similar nature, and different from any commonly found on this globe. When first found, they were easily reduced to powder by the fingers, but by exposure to the air they gradually hardened.

In relation to the late wonderful display of meteors, a correspondent of the Philadelphia Advocate of Science remarks:

"The causes of these unusual phenomena, although they have elicited much inquiry, remain to be explained. That these meteors were dependent on the same causes as the common 'shooting stars,' does not admit of a doubt. The theories that have hitherto been advanced to account for them are, the inflammation of gas, the former explosion of a planet, terrene volcanoes, lunar volcanoes, terrestrial comets and electricity.

"That they depend on the combustion of gas, is a notion that has become obsolete. No philosopher of the present day, so far as I am aware, pretends to uphold it.

"Some have ascribed them to the explosion of the ancient planets of which the four asteroids were composed. A vast quantity of small fragments, say they, were driven into space by this

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catastrophe, and these fragments continue to revolve in the solar system, and when they chance to enter the earth's atmosphere, take fire, owing to friction, and give rise to meteors. To this it may be replied, that if every visible meteor were a solid body, the fall of meteoric stones would be an every day occurrence; whereas it rarely happens.

"The same argument is sufficient to refute the doctrine that they proceed from volcanoes in the moon, or in the earth, or that they are terrestrial comets. In short, this argument disproves any theory which regards them as so many solid bodies.

"It seems to me that the most plausible method of explaining them, is to refer them to electrical agency. By some persons they are supposed to be of two kinds, electrical, and solid. Those which appear so frequently in the upper regions of the atmosphere are alleged to consist of electricity, while the others are said to be cometary bodies, revolving round the earth."

We shall pursue this interesting subject farther in some future number of the Magazine.

THE HULAN AND HIS CHARGER.

AFTER THEODORE KOERNER.

Stand my good charger! steady stand!
In thy thick mane I wreath my hand,
As bounding from the yellow sand,
We go to fight for Fatherland!
Hurrah! my steed, hurrah!

Let others pant the prize to gain,
In rival race on festal plain,
Be ours to join the marshal train,
Where warrior's blood flows fast as rain!
Hurrah! my steed, hurrah!

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Hark! 't is the clarion's clanging bray;
'T is answered by the joyous neigh,
Forth to the battle's maddening fray,
Glory or death! for us to day!
Hurrah! my steed, hurrah!

The sabre gleams, the cuirass clanks,
Now side by side in charging ranks,
Like Danube when he bursts his banks,
We dash upon the foeman's ranks!
Hurrah! my steed hurrah!

LITHOGRAPHY.

It has already been shown, in a former article on this subject, that, for a series of years, Senefelder's patience and perseverance, under the most disadvantageous circumstances, were truly astonishing; and we shall now proceed briefly to detail such other particulars in further illustration of the preceding remarks, as may be deemed necessary for completing this part of our subject.

Satisfied as to the originality of his new discovery, Senefelder became anxious to turn it to account, by laying it before the world; and in order to raise the necessary funds for at once effecting this object, we find him, when all other means had failed, offering himself as a substitute for a friend who was then a soldier in the service of the elector of Bavaria, but with his usual want of success; for, on presenting himself at Ingolstadt for the purpose of being enrolled, it was discovered that he was not a native of the electorate, and, consequently, inadmissible to its army. His last hope seemed now to have failed him, and he describes his feelings as being at this time in a state

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"bordering on despair." However, it was not long ere his prospects began again to brighten a little; and he at length succeeded in publishing, in conjunction with the composer, a collection of music, the execution of which was greatly admired, and which obtained for him the patronage of the elector, and a promise of an exclusive privilege.

About this time, another candidate for the honor of having discovered the new art came forward in the person of M. Schmidt, professor of the Royal College; and although, for a time, the station which this gentleman filled helped to support his pretensions against his less fortunate rival, public opinion by degrees became less divided, and ultimately there prevailed but one belief on the subject.

It was not till after having labored a considerable time in his new profession, and experiencing innumerable inconveniences from being compelled to execute all his writings on the stone backwards, that he commenced another series of experiments, the object of which was to obviate the necessity of *writing* on the stone, by previously doing it on paper, and then transferring it from the paper to the stone, *reversed*. Some thousands of experiments were made before he was enabled to produce a composition for preparing the surface of the paper suited for all the purposes which he had in view, and it was this property of the new art which more particularly attracted public notice, from the incalculable benefits which it was foreseen would be conferred on all kinds of business when fairly brought into general practice. It was about this time also that he invented the lever press, which added greatly to the comfort and certainty of the operations in the printing department of lithography.

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Having at length obtained an exclusive privilege for exercising his art in Bavaria, he did not consider it any longer necessary to keep the process a secret, and it soon spread over the greater part of Germany; but his experience enabled him for several years to outstrip all his competitors in so far as the execution of his work was concerned, although, in every other respect, he seemed to be almost the only one in whose hands the art did not give ample returns both for money and labor. In no other way can this uniform want of success be accounted for, than by supposing, that, while others were making the most of what he had already discovered, he was devoting much of his time to the *experimental* part of the business. This in fact was the case.

About the year 1800, Senefelder went to London for the purpose of establishing himself there as a lithographer, but a few months sufficed to convince him that he had little chance of succeeding in his undertaking; and he returned to his own country, where, on his arrival, he found that many attempts had been made in his absence to deprive him of the benefit of his privilege. Among the most forward in this scheme were two of his brothers, to whom he had communicated all the secrets of the art, and it took some time to counteract the bad effects of their ungenerous conduct. Finding that, in his native place (Munich), others were reaping many of the advantages which by right should have been the reward of his own industry, he was induced to go to Vienna, for the purpose of superintending a calico printing establishment, the operations of which were to be conducted on the principles of the new art; and here, for the space of several years, his talents were entirely devoted to this new undertaking; but, at the end of which time, from a

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variety of causes over which he had no control, he was again thrown upon the world, destitute of every thing save the resources of his own genius. It was not till about the year 1809 that Senefelder was extricated from the difficulties of his situation, by being appointed inspector of the royal lithographic establishment at Munich, which at once placed him above the necessity of exercising his profession as a means for gaining his daily subsistence, and enable him to devote a portion of his time to the improvement of such branches of the art, as, in his former circumstances, he had never found it possible to effect.

In conclusion, it may not be out of place to remark, that, in the case of Senefelder, we have another instance to the many recorded facts in the lives of eminent men, of the successful pursuit of knowledge under extraordinary difficulties—presenting an example worthy of our highest admiration and respect.

THE TURKEY VULTURE.

The Turkey Vulture, or Turkey Buzzard, is common in the south and west, but is very seldom seen as far north as New York. There are two species, the Turkey Vulture, and Black Vulture, which are birds of the same tribe that inhabit North America. The King Vulture of South America, with these two, are the only species known on the western continent.

We find the following in some of the papers. We do not greatly admire the experiment of putting out a bird's eyes, merely for the object mentioned; nor do we attach credit to the statement, though affirmed by Maj. Pillars.

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"Curious fact in Natural History.—We are by no means unaccommodating in our disposition to believe all we hear. We do not therefore assert our skepticism as to the truth of a communication, in the last number of the American Turf Register, from a correspondent in Illinois touching the power of the Turkey Buzzard, in a few moments to reproduce its eyes, when picked out, by putting its head under its wing! The assertion is made on the authority of the writer, who saw the experiment tried, and on the affidavit of Maj. John Pillars, who has witnessed it on numerous occasions. Mr. Skinner's correspondent says, speaking of a Buzzard, which his host had caught, 'Having no sharp pointed instrument at hand, other than a common pin, with that he punctured one of his eyes; the aqueous humor flowed out, a whitish-like film came over the eye, and all its lusture instantly disappeared. The head was then placed under the wing of the bird, where it remained a few minutes

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only; and when taken out, the eye had resumed its own brilliancy, appearing as sound as the other, with not a speck upon it. In this experiment, it is true, the eyeball was not ripped open.' This is positive testimony to a most curious fact. Maj. Pillars, whose respectability is vouched, says, in his affidavit, that he ripped open the eyes of a Buzzard in the course of three or four months not less than fifty times; and once, at a log-rolling, ten times in one day. The head was, after each mutilation, placed for a few minutes, under the wing, when the bird gradually withdrew it, with two good sound eyes free from speck or blemish, and possessing the power of vision unimpaired. It is mentioned, as a common belief in the west, that the down of the buzzard's wing is a specific for blindness."—*Fredericksburg Arena.*

BRIDGES.

One of the most curious provincial bridges in

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Great Britain is that at Taff, in Glamorganshire. It is of one arch, and its space is rather more than one hundred and forty feet.

The architect of this bridge was a poor, uneducated man, and the persevering courage with which he pursued his object till the completion of the edifice, is worthy of record. His first attempts failed in consequence of the enormous pressure of the haunches or sides of the bridge, which forced up the key-stone, and to obviate this, he pierced the stone-work with cylindrical apertures, which remedied the defect. Prior to the erection of this bridge, that of the Rialto had the largest span of any in existence.

ON THE INSTINCT OF ANIMALS.

A wise and merciful Creator has bestowed upon man superiority over all his creatures. "The fear of him, and the dread of him, is upon every beast of the earth, and upon every fowl of the air; and upon all that moveth upon the earth, and upon all the fishes of the sea." But, while his superior reasoning faculties enable him to overcome all other living things,—to destroy those which are obnoxious, to tame and subdue those which may be rendered subservient to his necessities and comforts,—it is curious to observe the modes of defence or escape, which the same all-bountiful Providence, "without whose will not even a sparrow falleth to the ground," has bestowed upon those inferior classes, which are too frequently subject to the wanton persecution of the human race.

In no manner is His fatherly care of even the lowest of his creatures more curiously and convincingly displayed, than in the selection of the colors

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with which he has clothed and adorned each particular order. Thus, he has contrasted with the ground on which they live, those animals that are capable of making their escape from danger, either by their strength or agility; while he has granted to those whose weakness, or slowness of motion, would expose them to the assaults of their enemies, a color, which by confounding them with the object upon which they rest, affords an easy means of escape. The snail is of the color of the bark of the trees upon which it feeds, or of the wall on which it takes refuge.

Flat fishes, which are indifferent swimmers, such as the turbot, the flounder, the plaice, the sole, and several others, which exist principally at the bottom of the sea, are of the color of the sands where they find their nourishment, being spotted like the beach with gray, yellow, black, red, and brown. But what is more wonderful, is the instinctive sensibility which they possess of the protection afforded them by this resemblance. When inclosed within the parks formed on the strand to entrap them, and the tide is gradually retiring, they bury their fins in the sand, awaiting the return of the tide, leaving only their backs visible; and thus, from their color, become hardly distinguishable from the ground in which they have partly imbedded themselves.

The fishermen make use of a kind of a sickle, with which they trace small furrows in every direction along the sand, to find out by the touch what they cannot discern with the eye. "Of this," says a celebrated French naturalist, "I have been frequently a witness—much more highly amused at the dexterity displayed by the fish than at the skill of the fisherman."

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The same wonderful instinct, and correspondence of their plumage to the color of the earth, may be remarked in most of our small birds, whose flight is feeble, and of short duration. The gray lark, when alarmed or terrified, glides away, and takes its station between two little clods of earth, and at this post will remain with such steadfastness, as hardly to quit it when the foot of the fowler is ready to crush it. The same thing is true of the partridge: sportsmen cannot fail to have remarked, that these birds, when "they are as wild as hawks" on the stubble, will frequently on the fallows "lie like stones."

A similar degree of instinct has been remarked even in insects, an instance of which I may be excused for extracting from the account of a distinguished observer of the natural world:

"In the month of March last, I observed by the brink of a rivulet, a butterfly, of the color of brick, reposing, with expanded wings, on a tuft of grass. On my approaching him, he flew off, but alighted at some paces distance on the ground, which, at that place, was of the same color with himself. I approached him a second time: he once more took flight, and perched again on a similar stripe of earth. In a word, I found it was not in my power to oblige him to alight on the grass, though I made frequent attempts to that effect,—and though the spaces of earth which separated the turfy soil, were remarkably narrow and few in number."

On a future occasion I may take an opportunity of continuing this subject. R. H. F.

Salutation.—The Laplanders apply their noses strongly against the person they salute.

In New Guinea, they place leaves upon the head of those they salute.

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ITALIAN BANDITTI.

The banditti of Italy are what the forest outlaws of England were in the days of Robin Hood. They are not of the poorest or the vilest of the inhabitants. They generally possess a little field and a house, whither they retire at certain seasons, and only take the field when the hopes of plunder allure them, or the fear of a stronger arm drives them to the woods and rocks. They live under various chiefs, who, while their reign lasts, are absolute; but as they are freely chosen, they are as freely deposed, or sometimes murdered, if they offend their subjects.

Many of the stories of the Roman and Neapolitan banditti are far from being of a tragical nature. The brigands were often facetious and full of frolicsome tricks at the not very serious expense of those they waylaid, while at times they were the butts and victims to those who fell in with them.

Mac Farlane relates that as Lady B——— was travelling from Rome to Naples, with rather a numerous suite, she "fell among thieves." The robbers had a tolerably good booty, but there was one excellent laugh against them. Her ladyship's medical attendant had a large medicine chest in the carriage: this was immediately broken open by the robbers, who thought the neat and strong mahogany cases must contain jewels or other valuables. They were disappointed and somewhat puzzled, when they found a number of square crystal bottles. Two of the robbers took out each one of these bottles, whose medical contents were bright, and liquid; the one like rosano, the other like maras-china di

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Zara. The two robbers concluded at once they were nothing else than these favorite liqueurs, or some foreign cordial of a similar nature and excellence; and anxious for the first draught, each put his bottle to his mouth, and did not withdraw it until he had taken a hearty swig. Then, indeed, the bottles were withdrawn and dashed, with curses to the earth; and the two rogues, with terror in their countenances, threw themselves on the doctor, in the same breath, threatening to kill him, and begging to know whether they were poisoned, and he could cure them? The worthy practitioner, who was an Irishman, and as such fond of a joke, would have had here a good opportunity of indulging in one, by making the trembling fellows believe for a while that they had swallowed some infernal poison, worse than the *acqua tophana;* but under circumstances, and in the presence of armed banditti, he thought it more prudent to tell them that they had only swallowed a little medicine, which could do them no harm, however badly it might taste; and to reserve his laugh at them for taking his physic for sweet waters till a more convenient opportunity.

"In the next little anecdote," says Mac Farlane, "another brigand of another band cut a still more ridiculous figure. My friend Mr. W———, a merchant of Naples, was travelling post with a Swiss merchant, and had nearly reached the city of Capua, which is only about fourteen miles from Naples, when his carriage was suddenly stopped. It was night, but a beautiful moon—the moon of Naples, which, as the witty Marchese Caraccioli used to say, was worth a London sun, illuminated the scene, and allowed W——— to see that there were only three or four brigands near the coach, and that they had not yet knocked the postilion off the

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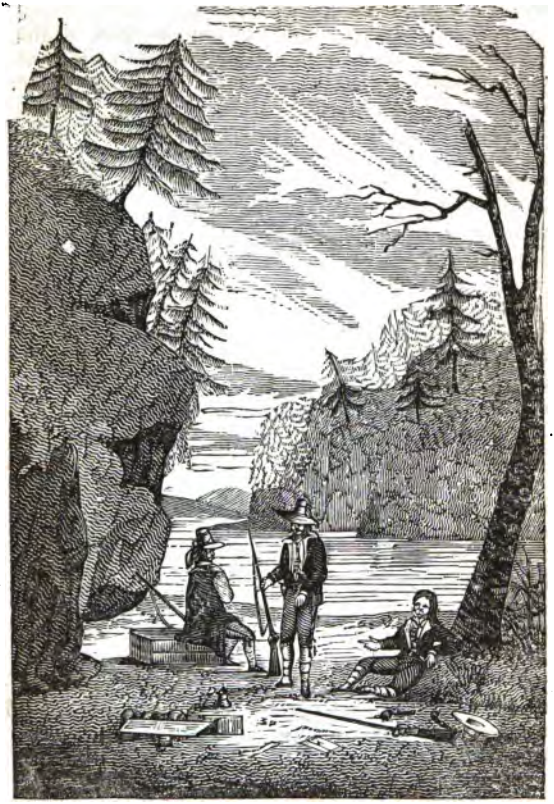

horses. W——— took his measures accordingly with great presence of mind and boldness. As the foremost brigand came to the side of the carriage,

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within reach, bawling and cursing for those within to come out and be robbed, he caught hold of the ruffian by the breasts of his jacket, and called out to the postilion to gallop off for Capua, where he should be well rewarded. The postilion, who had known him before on the road, took W——— at his word, and, with a boldness rarely found in his class, whipped his horses, that went off, (as Neapolitan horses generally will do,) 'an end.' As the postilion's whip touched the withers of his steeds, a bullet whizzed past his head, but missed its aim. Away then went the carriage and the merchants and the robber as swift as the old witches in Goethe's Faustus; W———, who was a robust man, keeping a firm hold of the robber, who dangled,—his head and shoulders in, and the rest of his body outside of the vehicle,—like a lamb or a calf over a butcher's cart. W———'s companion occasionally assisted him. After numerous but vain struggles to extricate himself from their grasp, the captured brigand, whose legs were bruised in the cruellest manner against the rapid carriage wheels, and his breath almost bumped out of his body, protested it was all a mistake, and begged most piteously to be released. The merchants, however, kept the prize they had made in so curious a manner, and soon arrived at Capua. This being a fortified town, most awkwardly for travellers, placed on the high road, they had to wait some time until a letter was sent to the commandant, and permission obtained to admit them. When the drawbridge was lowered, they rolled over it, with the robber still dangling at the coachside, and delivered him at the guard-house. The next morning the merchants appeared before the justice of peace, and after their depositions had been received, the brig-

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and was given over to the civil authorities, and cast into prison, where he lay for many months without being brought to judgment. What finally became of him I know not; but I remember very well, that my friend W———, though he was rather proud of the novel exploit, had so much trouble in consequence of it, and the somewhat peculiar course of Neapolitan justice, that he used often to wish he had left the fellow in the road."

One of the boldest deeds of resistance to the brigands was performed by a major of Murat's staff, a native of one of the German cantons of Switzerland. His name was Vollf. This officer was travelling post from Naples to Rome with despatches, in a little low, open caleche; he had not even a servant with him. In the Pontine Marshes he was stopped by six sturdy and well-armed brigands. Expecting no resistance from a single man, the robbers stood by the door of the carriage, uttering tremendous curses and commanding him to descend. This he presently did; but as he left his seat he grasped a ready brace of pistols and crossed his arms under his military cloak; and as he touched the ground he pressed a trigger on either side of him, and two of the brigands, who were almost in contact with his person, fell dead by the carriage. His sabre was as ready as his pistols—with it he cleft the head of one robber who fell, and wounded another, who then, with his two unhurt but terrified companions, took to flight, and left the officer master of the field.

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CHARLOTTE CORDAY.

This engraving represents the arrest of Charlotte Corday, the intrepid assassin of Marat, one of the sanguinary tyrants of the French Revolution. This determined female, then in her early youth, and distinguished by her personal attractions, appears to have conceived the idea of the daring deed which she afterwards accomplished, immediately on learning the proscription of the Girondists, and the victory of Roberspierre and his associates in the beginning of June. Having set out from Caen in Normandy (resolved that nothing should deter her from perpetrating her purpose) she arrived in Paris on the 11th of July. On the 12th she addressed a note to her intended victim, professing to have some intelligence to communicate to him respecting those of the proscribed deputies who had made their escape and assembled in the city she had come from, which

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would interest him as a lover of his country, and soliciting to be admitted to his presence.

Marat was at this time indisposed, and for the last three days had not appeared in the Convention. On the 13th, in the earlier part of the day, she presented herself at the door of his house, but was refused admittance. Leaving a second note, she retired, and came back between seven and eight o'clock in the evening in a carriage; when, after some opposition from the attendants, she was called in by order of Marat himself, whose attention had been attracted by the noise. She found the deputy in the bath. Having entered into conversation with him, she had discoursed for some minutes on the proceedings of the refugees in Normandy, when Marat remarked that in a few days he would have every man of them guillotined. The words were no sooner uttered, than, drawing forth a long knife from under her robe, the female Brutus plunged it up to the haft in the body of him whom she believed to be the chief enemy and curse of her country.

The cries of the wounded man instantly brought his attendants into the apartment; and his murderess, seeing all chance of escape at an end, resigned herself into their hands, and was forthwith conducted to the prison of the Abbaye, amidst the shouts and execrations of a mob, consisting in great part of the vilest class of her own sex, who had assembled around the house on the rumor of what had taken place. Marat died in a few hours. Four members of the Committee of Police and as many of that of General Security immediately proceeded to interrogate Charlotte Corday respecting the crime she had committed. Her answers to some of the questions put to her by these persons depict

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forcibly the energetic and resolute character of the woman. She at once admitted that it was she who had slain Marat. Being asked what induced her to commit that assassination? His crimes, she boldly replied. Was it a priest who had taken the oaths to the constitution, they asked her, or one who had not, to whom you went to make confession at Caen? I went, she answered, neither to one nor the other. At another question, raising her voice with all her force, Yes, she exclaimed, I have slain one man to save a hundred thousand, a wretch to preserve those who are innocent, a ferocious beast to give repose to my country; I was a republican before the Revolution, and I never wanted energy. What do you understand by energy? asked her examiners. The sentiment, she replied, by which those are animated, who, casting from them all thought of their interest as individuals, know how to offer themselves up as sacrifices for their country.

Of course, after such an act as she had committed, her fate was sealed. She appeared for the first time before the revolutionary tribunal on the 16th; when nothing could exceed the self-possession of her demeanor, and the lofty indifference with which she regarded the violent death to which she was so soon to be surrendered. This unfortunate woman, notwithstanding her exaggerated patriotism, appears to have possessed a nature in many respects nobly endowed, and even a heart susceptible of the tenderest affections. In a letter which she wrote from her prison to Barbaroux, whom she had known at Caen, she says, "I have never hated but one being on earth, and him with what intensity I have sufficiently shown; but there are a thousand whom I love still more than I

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hated him." "A lively imagination," she goes on, "and a feeling heart, promise but a stormy life; I beseech those who might regret me to consider this, and they will rejoice to know that I am enjoying repose in the Elysian fields with Brutus and others of the ancients." She addressed a short note, on the day before her execution, to her father, in which, after having asked his forgiveness for having disposed of her life without his permission, she adds, "I pray you to forget me, or rather to rejoice in my fate; the cause, at least, in which I perish is a noble one. I embrace my sisters, whom I love with my whole heart, as likewise all my relations. Never forget the verse of Corneille:

'Le crime fait la honte, et non pas l' échafaud.'" *

The heroine, when her last hour was come, shrunk from her fate no more than she had previously done. Before setting out for the place of execution, she asked with a smile of scorn whether the body of Marat was to be deposited in the Pantheon. Such was the imposing dignity of her demeanor as she passed along on her way, that even the abandoned rabble who were wont to flock around the guillotine, and disturb with their ferocious howls the last moments of its victims, were on this occasion awed into comparative silence; and some of the more respectable spectators took off their hats at her approach, while murmurs of applause and sympathy broke from others, which all their fears for themselves could not restrain. She mounted the scaffold with a firm step. When the executioner proceeded to tie her hands, a part of the ceremony for which she was unprepared, she at first manifested a disposition to resist the attempt,

* The crime and not the scaffold makes the shame.

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imagining that some insult was intended her; but, on the matter being explained, she smiled at her mistake, and offered no farther opposition. When she had laid her head on the block, the executioner removed a handkerchief that covered her neck and shoulders; and on this those who stood around her remarked that a quick instinct of modesty instantly suffused her cheeks with a deep blush. The mounted blood still reddened her visage when the head, after being separated from the body, was held up by the executioner to the view of the multitude.

SENSE OF SMELL IN INSECTS.

In bees, the odor of honey produces the most obvious influence. Mr. John Hunter mentions that he has seen great commotion produced in a recent swarm, in wet weather, when he supposed the bees to have been hungry, by placing honey on the floor of a glass hive, which gave him a good opportunity of observing their proceedings. All of them appeared to be eagerly on the scent, and even those which were weak and hardly able to crawl, threw out their tongues as far as possible to get at the honey. The elder Huber instituted some experiments still more interesting.

"In order," he says, "to ascertain whether the appearance of the flowers or the odor of the honey apprises bees of its presence, we placed honey in a window, near a hive, where the shutters, almost close, still permitted them to pass if they wished Within a quarter of an hour four bees and a butterfly had insinuated themselves, and we found them feeding thereon. For the purpose of a still more accurate experiment, I had four boxes, different in

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Snapdragon, and Bees entering the flowers.

size, shape, and color, made with small card shutters, corresponding to apertures in the covering. Honey being put into them, they were placed at the distance of two hundred paces from my apiary. In half an hour bees were seen trooping thither, and by carefully traversing the boxes, they soon discovered the openings through which they might

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introduce their bodies, and, pressing against the valves reached the honey.

We have frequently observed with much interest the method taken by various species of bees to open the flower of the common snapdragon. Resting upon the lower lip of the flower, the insect insinuates its tongue between the upper lip and the valve, and then thrusting in its head, acts with it as a wedge to force the shut edges asunder. In this manner it speedily accomplishes an entrance, and the flower shuts over it with a *snap;* hence, perhaps, the popular name. When the bee has obtained the honey at the bottom of the flower, it makes its exit in the same way as it entered.

REFLECTIONS ON THE STUDY OF NATURE

BY LINNÆUS.

I know not what to think of those people who can, without emotion, hear or read the accounts of the many wonderful animals which inhabit foreign countries.

What principally strikes us agreeably at first sight, is color; of which the good and great Creator has given to some animals a rich variety, far beyond the reach of human art. Scarcely any thing can equal the beauty of birds in general; particularly the splendor of the Peacock.

The Author of Nature has frequently decorated even the minutest insects, and worms themselves, which inhabit the bottom of the sea, in so exquisite a manner, that the most polished metal looks dull beside them. The great golden beetle of the Indies has its head studded with ornaments like precious stones, brilliant as the finest gold; and the *Aphrodita Aculeata*, reflecting the sunbeams from the

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depths of the sea, exhibits as vivid colors as the peacock itself, when spreading its jewelled train.

The difference of size, in different animals, must strike us with no less astonishment; especially if we compare the huge whale with the almost invisible mite; the former, while it shakes the largest ships with its bulky body, is itself a prey to the diminutive *Onisci*, and is obliged to have recourse to the sea birds, who, sitting on its back, free it from these vermin.

We are as much amazed at the prodigious strength of the elephant and rhinoceros, as we are pleased with the slender deer of Guinea, which is, in all its parts, like our deer, but scarcely so large as the smallest lap-dog. Nature has, however, in the nimbleness of its feet, abundantly compensated this animal for the smallness of its size.

The Great Ostriches of Arabia, whose wings are insufficient to raise their bulky body from the ground, excite no less admiration than the little humming-birds of India, hardly bigger than beetles, which feed on the honey of flowers, like bees and flies, and, like those insects, are the prey of ordinary spiders; between which, and the large spider of Brazil, there is as much difference in size, as between the humming-bird and the ostrich. This great spider often attacks the largest birds, dropping on their backs, by means of its web, from the branches of trees; and while they vainly seek for security in flight, it bites them in such a manner that they not unfrequently fall lifeless to the ground.

The singular figures of some animals cannot fail to attract our notice. We wonder, with reason, at the angular appendage to the nose of the American bat: nor is the short and slender upper mandible,

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or jaw, of the Indian woodpecker less remarkable; the form of the latter being as unusual among birds, as is among fishes the figure of the American fishing-frog, which is furnished with feet, but cannot walk; while another kind of fish, when the rivulet which it inhabits, becomes dry, has a power of travelling over land, till it finds more copious streams.

The plaice, the sole, and many other fishes, although the only animals which have both eyes on the same side of the head, do not, perhaps, astonish us so much, being common fishes, as the horned frog of Virginia, whose head is furnished with a pair of horns, at the extremities of which its eyes are placed; its stern aspect cannot fail to strike with horror all who behold it. This frog is unable, however, to move its eyes in different directions at the same time, like the chameleon, which appears to have a power of contemplating at once many distant objects, and of attending equally to all: for this animal certainly does not live on air, as many have reported, but on flies, which it follows with its piercing and sparkling eyes, till it has got so near them, that by darting forth its long tongue, they are instantly caught and swallowed. While the slender ant-bear, which has no teeth, and which the Creator has appointed to live on ants alone, by coiling up its tongue like a serpent, and laying it near an ant hill, collects the little animals, and devours them entire.

He who has given life to animals, has given them all different means of supporting it; for, if all birds were to fly in the same manner, all fishes to swim with the same velocity, and all quadrupeds to run with equal swiftness, there would soon be an end of the weaker ones.

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ON THE GROWTH OF PLANTS.

The astonishing power with which God has endued the vegetable creation to multiply its different species, may be instanced in the seed of the elm. This tree produces one thousand five hundred and eighty four millions of seeds; and each of these seeds has the power of producing the same number. How astonishing is this produce! At first one seed is deposited in the earth; from this one, a tree springs, which in the course of its vegetable life produces one thousand five hundred and eighty millions of seeds. This is the first generation. The second generation will amount to two trillions five hundred and ten thousand and fifty-six billions. The third generation will amount to fourteen thousand six hundred and fifty-eight quadrillions, seven hundred and twenty-seven thousand and forty trillions. And the fourth generation will amount to fifty-one sextillions, four hundred and eighty-one thousand three hundred and eighty-one quintillions, one hundred and twenty-three thousand one hundred and thirty-six quadrillions! Sums too immense for the human mind to conceive; and when we allow the most confined space in which a tree can grow, it appears that the seeds of the third generation from one elm would be many myriads of times more than sufficient to stock the whole superfices of all the planets in the solar system!

Thistles multiply enormously: a species called the carolia sylvestris bears ordinarily from twenty to forty heads, each containing from one hundred to one hundred and fifty seeds. Another species called the acanthum vulgare, produces above one hundred heads, each containing from three hundred to four hundred seeds. Suppose we say that these thistles produce, on a medium, only eighty heads, and that each contains only three hundred seeds;

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the first crop from these would amount to twenty-four thousand. Let these be sown, and their crop will amount to five hundred and seventy-six millions. Sow these, and their produce will be thirteen billions, eight hundred and twenty-four thousand millions; and a single crop from these, which is only the third year's growth, would amount to three hundred and thirty-one thousand seven hundred and seventy-six billions; and the fourth years' growth will amount to seven thousand nine hundred and sixty two trillions six hundred and twenty four thousand billions;—a progeny more than sufficient to stock not only the surface of the world, but of all the planets in the solar system, so that no other plant or vegetable could possibly grow, allowing but the space of one square foot for each plant.—*Dr. Adam Clarke.*

MARTYRDOM OF ST. VINCENT, A SPANISH MARTYR.

This Christian hero was a native of Saragossa, and the son of a distinguished magistrate. His learning and eloquence early introduced him to the notice of his diocesan Valerius, whose deacon he became; and as that prelate was afflicted with an impediment in speaking, on him devolved the duty of addressing the congregation from the episcopal seat. His popularity reached the ear of Dacian, who summoned both bishop and deacon before him, and who committed both, heavily fettered, to the dark dungeons of Valencia. Having passed some time in this horrible abode, with food scarcely sufficient to sustain life, both were again brought before the tyrant, who, on observing their cheerful

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countenances, which exhibited no marks of suffering, angrily demanded of the guards whether they had not disobeyed his commands. On hearing that his orders had been punctually performed, he artfully endeavored to seduce by an affected moderation those on whom severity had produced no visible effect. He exhorted them to comply with the decrees of the world's great masters, who insisted that the dignity of the ancient worship should be restored, and the gods every where honored by sacrifices.

Valerius attempted to reply, but seeing his embarrassed utterance, his young friend said:— "Father, dost thou permit me to answer this judge?" The other replied, "My son, I have long trusted thee with the office of speaking, and I leave thee now to justify the faith for which we are standing here." In a discourse of surprising energy and eloquence, the deacon then vindicated the unity of God, and the divinity of Christ, and contrasted the sublimity of the doctrines he professed with the puerile absurdities of paganism. He concluded by asserting that entreaties no less than menaces would be unable to make them guilty of idolatry.

The intrepidity of the advocate filled Dacian with fury. "Let this bishop," he exclaimed, "be removed hence; as he has disobeyed the imperial edict, he is justly exiled: but for this fellow, who to disobedience adds insult, a heavier punishment is reserved. Apply the torture; dislocate his limbs, and let him feel a rebel's punishment." The order was promptly obeyed, and Dacian had both the gratification to witness, and the barbarity to deride, the agonies of the sufferer. The latter, whose cheek blanched not, and whose lips uttered not one word of complaint, regarding his persecutor with

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that calm composure which proved that his heaven was already begun, merely replied, — "I have always wished for an opportunity of proving my attachment to the religion of Christ; thou hast given it me, and I am content." Mad with rage, the governor struck the executioners because they could not force a single groan from their victim. "What!" exclaimed the sufferer, with the most provoking coolness, "dost thou too wish to avenge me of these brutal men?" Dacian now foamed at the mouth, and roared, rather than spoke, to them, —"Cannot you extort one cry of pain from this man, ye who have so often bent the most stubborn malefactors? Is he thus to triumph over us?" Sharper instruments were now brought, the flesh of the Christian was torn from his bones, and his whole body represented the appearance of one vast wound. For a moment even the savage Dacian was, or appeared to be, softened. "Young Christian," said he, "hast thou no pity for thyself? In the flower of thine age canst thou not be persuaded to avoid a horrible death by one act of submission?" "Thy feigned sympathy," replied the other with the same unshaken tranquillity, "affects me as little as the exquisite torments thou causest me to feel. I will not deny my Maker for thy idols of wood and stone. Thy perseverance will fail sooner than my constancy."

The victim was next laid on an iron bed, the surface of which was covered with sharp projecting points, and a slow fire placed under it. His body was pressed against the spikes, boiling liquids were poured into his wounds; his bones were crushed by blows with iron bars: in short, every species of torture was employed that hellish cunning could devise. Still the heroic sufferer murmured not.

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At length, his mangled limbs having been dashed on a bed of sharp flints, he felt that the moment of his deliverence was at hand. In vain did the tyrant order him to be laid on a comfortable couch, and every effort made to restore him, that, on his recovery, human ingenuity might be taxed for the invention of new torments: in a few hours he expired. His corpse was carried out to sea, and plunged into the waves: it was soon washed on shore, was found by some Christians, and secretly buried. The report of his superhuman constancy was rapidly spread throughout Christendom; and in the time of St. Augustine his festival was celebrated in every Christian place.—*Lardner's Cyclopedia.*

Turnip-Bread.—A very good bread may be made of turnips, by the following process: Let the turnips be washed clean, pared, and boiled; when they are soft enough for being mashed, the greater part of the water should be pressed out of them, and they should then be mixed with an equal quantity in weight of coarse wheat flour. The dough may then be made in the usual manner, with yeast or barm, salt, water, &c. It will rise well in the trough, and after being well kneaded, may be formed into loaves and put into the oven. It requires to be baked rather longer than ordinary bread, and when taken from the oven is equally light and white, rather sweeter, with a slight but not disagreeable taste of the turnip. After it has been allowed to stand twelve hours, this taste is scarcely perceptible, and the smell is quite gone. After an interval of twenty-four hours it cannot be known that it has turnip in its composition, although it has still a peculiar sweetish taste. It appears to be rather superior to bread made only of wheat flour—is fresh and moister, and even after a week continues good.

Moderate your Desires.—Take away your expensive follies, and you will have little occasion to complain of hard times.

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LOWELL.

Lowell, the American Manchester, is situated at the confluence of Merrimack and Concord rivers, twenty-five miles northwest from Boston. This town received its name from Francis C. Lowell of Boston, who was distinguished by his successful efforts in introducing the cotton manufacture into the United States. The place is undoubtedly destined to be a great manufacturing city.

The growth of Lowell for a few years past has been almost unparalleled. The foundation of the second factory was laid here in 1822, at which time, the land now included in the town, exclusive of one factory establishment, contained less than one hundred inhabitants.

It may not be uninteresting to our readers to learn the state of the manufactures of cotton and woollen goods in Lowell at the present time. We are indebted to the Journal of that place for the following statistical remarks:

"The whole amount of capital at present invested, is $6,150,000. The number of large mills in actual operation is nineteen. These mills are each about one hundred and fifty-seven feet in length and forty-five in breadth—of brick, five stories high, each story averaging from ten to thirteen feet high, thus giving opportunity for a free circulation of air. The aggregate number of spindles used is 84,000 — looms 3000. The whole number of operatives employed is about 5000, of which 1200 are males 3800 are females. The quan-

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tity of raw cotton, used in these mills per annum, exceeds 8,000,000 pounds or 20,000 bales. The number of yards of cotton goods of various qualities manufactured annually is about 27,000,000. Were the different pieces united, they would reach to the distance of 15,300 miles! In this estimate is included about 2,000,000 yards of coarse mixed cotton and woollen negro clothing, in the manufacture of which about 80,000 pounds of wool are used per annum.

"The quantity of wool, manufactured annually into cassimeres, is about 150,000 pounds, making about 150,000 yards.

"The Lowell Carpet Manufactory is in itself a curiosity. Sixty-eight looms are kept in operation by hand labor, viz: fifty for ingrained or Kidderminster carpeting, ten for Brussels, and eight for rugs of various kinds. One hundred and forty thousand pounds of wool in the course of a year are manufactured into rich and beautiful carpets, the colors of which will vie with any imported. The number of yards of carpeting made per annum is upwards of one hundred and twenty thousand, besides rugs. The operatives at present employed in all these mills receive for their labor about one million two hundred thousand dollars per annum.

"The Lawrence Company has now but one mill in operation. One other is erected which will be in operation in a short time. The foundations of two others are laid which will be ready to go into operation in the course of this year, (1833). These mills will contain about 16,500 additional spindles for cotton, and 550 looms, and will use 2,500,000 lbs. of raw cotton annually, furnishing employment for 700 operatives. These three mills will proba-

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bly be the means of adding at least one thousand five hundred to the population of Lowell.

The Middlesex Company has lately erected another mill, for the manufacture of cassimeres and broadcloths, which is said to be one of the first manufacturing edifices in the United States. It is one hundred and fifty-three feet in length, by forty-six, and six stories high. Nearly one million of bricks have been used in its construction. It contains 2,880 spindles, and sixty-four looms for cassimeres, and forty for broad cloths. It works up about 300,000 lbs. of wool annually, and employs about two hundred and seventy-five operatives.

"The edifice, in which all the machinery employed in the mills is manufactured, is termed the 'Machine Shop,' belonging to the Locks and Canal Company, and is probably the largest 'shop' in the country, being built of brick, four stories high, two hundred and twenty feet in length and forty-five feet in width. About two hundred machinists, some of them the most skilful and ingenious workmen in the United States, or in the world, are constantly employed. About six hundred tons of cast and wrought iron, two-thirds of which at least are of American production, are annually converted into machinery, besides a large quantity of imported steel.

"It is computed that upwards of five thousand tons of Anthracite coal are annually consumed in the Lowell Manufacturing establishments and Machine Shop, besides immense quantities of charcoal and pine and hard wood fuel."

The great water-power is produced by a canal a mile and a half long, sixty feet wide, and eight feet deep from its commencement above the head of Pawtucket falls on the Merrimack, to its termina-

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tion in Concord river. The entire fall is thirty-two feet. The water is taken from this canal by smaller canals, and conveyed to the factories, and thence into the Merrimack. There are room and water-power sufficient for fifty huge additional factories. In the suburbs of Lowell, near the canal is a settlement called New Dublin, which occupies upwards of an acre of ground. It contains not far from five hundred Irish people, and about one hundred cabins, from seven to ten feet high, built of slabs and rough boards, with a fireplace made of stones topped out with several flour barrels or lime casks.

There is a canal round the falls of the Merrimack, ninety feet wide and four deep; which however is no longer used for boat navigation. On the Concord river, about one mile from the town, are powder-works, at which powder of a very superior quality is made. Thirty thousand kegs, containing twenty-five pounds each, are made annually. Lowell communicates with Boston by means of the Middlesex canal, and a railroad between the two places has for many months been in progress.

By the census of 1830, the population of Lowell was 6,474; it is now probably nearer eleven thousand. The number of newspapers issued at present, is, we believe, seven.

The engraving at the head of this article affords a view of a part of the canal and some of the principal buildings connected with the manufactories of this flourishing town. The sketch was taken by Mr. Martins, an artist of first rate abilities, who has recently established himself in Boston. If Lowell continues to increase at the rate, which has thus far marked its progress, the next census may find it with a population of more than thirty thousand inhabitants.

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From the New York Knickerbocker.

THE PRAIRIES.

BY WILLIAM CULLEN BRYANT.

These are the gardens of the desert, these
The boundless unshorn fields, where lingers yet
The beauty of the earth ere man had sinned;
The prairies. I behold them for the first,
And my heart swells, while the delighted sight
Takes in the encircling vastness. Lo! they stretch
In airy undulations, far away,
As if an ocean in its gentlest swell
Stood still, with all its rounded billows fixed
And motionless forever. Motionless?
No, they are all unchained again. The clouds
Sweep over with their shadows, and beneath
The surface rolls and fluctuates to the eye;
Dark hollows seem to glide along and chase
The sunny ridges. Breezes of the South!
Who toss the golden and the flame-like flowers,
And pass the prairie-hawk, that, poised on high,
Flaps his broad wings, yet moves not—ye have played
Among the palms of Mexico, and vines
Of Texas, and have crisped the limpid brooks
That from the fountains of Sonora glide
Into the calm Pacific—have ye fanned
A nobler or a lovelier scene than this?
Man hath no part in all this glorious work:
The hand that built the firmament hath heaved
And smoothed these verdant swells, and sown their slopes
With herbage, planted them with island groves,
And hedged them round with forests. Fitting floor
For this magnificent temple of the sky—
With flowers whose glory and whose multitude
Rival the constellations! The great Heavens
Seem to stoop down upon the scene in love;
A nearer vault, and of a tenderer blue,
Than that which bends above the eastern hills.

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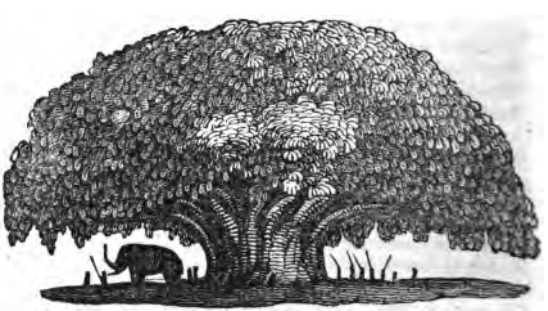
Still this great solitude is quick with life,
Myriads of insects, gaudy as the flowers
They flutter over, gentle quadrupeds.
And birds that scarce have learned the fear of man,
Are here, and sliding reptiles of the ground,
Startlingly beautiful. The graceful deer
Bounds to the wood at my approach. The bee,
A more adventurous colonist than man,
With whom he came across the eastern deep,
Fill the savannas with his murmurings,
And hide his sweets, as in the golden age,
Within the hollow oak. I listen long
To his domestic hum, and think I hear
The sound of that advancing multitude
Which soon shall fill these deserts. From the ground
Comes up the laugh of children, the soft voice
Of maidens, and the sweet and solemn hymn
Of Sabbath worshippers. The low of herds
Blends with the rustling of the heavy grain
Over the dark brown furrows. All at once
A fresher breeze sweeps by, and breaks my dream,
And I am in the wilderness alone.



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THE BAOBAD TREE.

This superb tree is a native of the burning climate of Africa. It is supposed, by the inhabitants of a shore which abounds in gigantic shrubs, to be the largest and most majestic production of the vegetable kingdom; and, from its enormous size and noble appearance, it well merits the title of Monarch of the Forest. Its trunk, which is scarcely ever known to exceed fifteen feet in height, often measures no less than eighty in circumference. The lower branches, which are adorned with tufts of leaves, extends from its sides horizontally, and bending by their great weight towards the earth, form a mass of verdure no less astonishing in size than beautiful in appearance. The circumference of a full-grown tree, measuring the circle which surrounds the branches, is said in some cases to be as much as four hundred and fifty feet; when of this size, its bulk is so enormous that, at a distance, it bears a greater resemblance to an overgrown forest than to a single tree. It is beneath the grateful shade of its spreading boughs that the wearied Negroes lie down, when scorched by the burning sun of their sultry climate; and it is the friendly shelter of its overhanging branches that the benighted traveller seeks, when overtaken or threatened with a storm. The countries of Africa which are particularly favorable to the production of this tree, and in which it chiefly flourishes, are those which lie along the coast and shores of the Niger, as far down as the kingdom of Benin.

The blossoms are as gigantic in proportion as the tree which bears them: they begin usually to appear about the month of July. The fruit ripens towards the latter end of the month of October, or in the early part of November. It differs greatly

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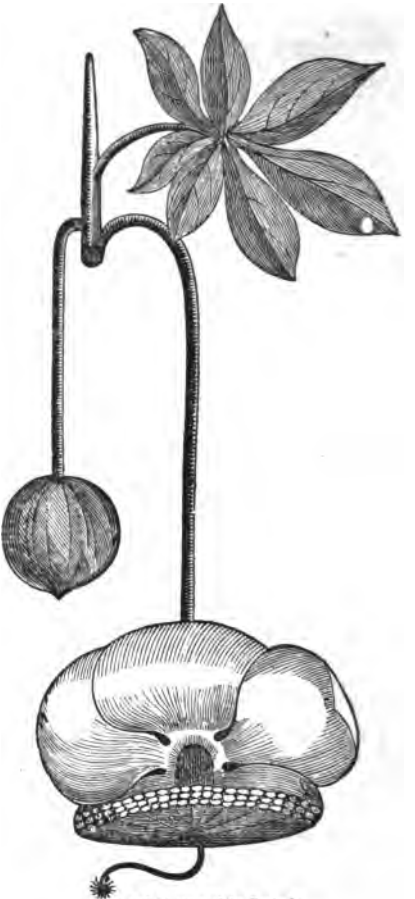

Bud and Blossom of the Baobad.

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in its shape; sometimes it is found of an oblong form, pointed at both ends; at other times, it is said to be perfectly globular; and it often bears a shape in medium between these two. In its size it differs as considerably as in its shape. It is covered with a green rind or shell, which, however, as it dries, becomes of a dark fawn color, and often assumes a deep brown. It is very prettily marked and ornamented with rays, and is suspended from the tree by a pedicle or stalk, the length of which is nearly two feet. The fruit, when broken, exhibits to the eye a spongy substance of a pale chocolate color, containing much juice. Its seeds are brown, and in shape resemble a kidney-bean. The bark of the tree is nearly an inch in thickness, of an ash-colored gray, greasy to the touch, and very smooth; the exterior is adorned with a description of varnish; while the inside is of a brilliant green, beautifully speckled with bright red. The wood itself is white, and very soft and penetrable, and is said to possess many very peculiar virtues, which are held in much esteem by the Negroes.

The age of this tree is not the least extraordinary part of its history. From names and dates which appear to have been carved upon some of them by Europeans, we are led to conclude that they were in existence five or six centuries ago. The leaves, when the tree is in its earliest infancy, are of an oblong shape, about four or five inches in length, having several veins running from the middle rib, of a beautiful and bright green; as the plant advances in growth, and increases in height and size, the shape of the leaves alter, and they become divided into three parts; afterwards, when the tree has attained its complete growth, and become a full-sized and vigorous vegetable, these

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three divisions increase to five, and the leaf assumes a shape not unlike that of the human hand.

The Negroes of Senegal dry the bark and the leaves in the shade, and then reduce them to a fine powder. This powder, which is of a green color, they preserve in little linen or cotton bags, and term it *lillo*. They use it at their meals and in their cookery,—putting a pinch or two into their food, in the same manner as we do pepper and salt, not so much with an idea of giving a relish to the dish, as with a view to preserve their health, to keep up a perpetual and plentiful perspiration, and to temper the too great heat of their blood; purposes which, if we may credit the reports of several Europeans, it is admirably calculated for. There is an epidemic fever, which rages in parts of Africa generally during the months of September and October, when the rains having on a sudden ceased, the sun exhales the water left by them upon the ground, and fills the air with noxious vapors. During this critical season, a light decoction prepared from the leaves of the Baobad tree, gathered the preceding year and carefully dried in the shade, is reckoned a most serviceable remedy.

Nor is the fruit less valuable than the leaves or bark. The pulp, in which the seeds are enveloped, forms a very grateful, cooling, and slightly acid food, and is often eaten as a treat by the natives: the richer sort amongst them mix sugar with it to correct its acidity. The woody bark of the fruit, and the fruit itself when spoiled, help to supply the Negroes with an excellent soap, which they procure by drawing a lye from its ashes, and by boiling it with rancid palm-oil.

In Abyssinia, the wild bees penetrate the trunks of the Baobab for the sake of lodging their honey

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within them. This honey is said to possess a very peculiar and delicious fragrance and a very agreeable flavor, on which account it is more esteemed and sought after than any other.

The trunks on such of these trees as are decayed serve, when hollowed out, as tombs and burial-places for the poets, musicians, and buffoons of the tribe. Characters of this description are in great esteem amongst the Negroes while living: they erroneously ascribe to them talents superior to the rest of their fellow creatures; which peculiar gifts they are supposed to derive from a commerce with demons, sorcerers, and bad spirits. This causes them, during their life-time, to be much respected and courted by their various and respective tribes, but their bodies, after death, are far from being treated with this respect; on the contrary, they are regarded with so great a horror, that they deny them the rights of burial—neither suffering them to be put beneath the ground, nor to be thrown into the sea or rivers, from a superstitious dread that the water thus dishonored would refuse to nourish the fish, and that the earth would fail to produce its fruits. The bodies, then, in order to get rid of them in some manner without degrading either the sea or land, they enclose in the hollow trunks of the trees, where, in the course of ages, they become quite dry and sapless, without actually rotting, and form in that manner a description of mummy without the help of embalming.

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ON THE DUTIES AND ADVANTAGES OF SOCIETY.

If people always knew and kept in mind the obligations they are under to society, they would be much better members of it, and much happier in every respect. Robinson Crusoe, on the desert island, before he got his man "Friday," is a picture of solitude which every body knows. But the picture of solitude there given, though it be pleasantly painted, is far from being true. All the arts, stratagems, and contrivances which Crusoe puts in execution, are derived from society. Crusoe is not a solitary, nor even a savage; and though his means of gratification are different, his desires are just the same as if he had been all the time in a civilized land.

We who have lived all our time in society, can form no notion of what a wretched and destitute creature man would be if he were alone, and had never profited by the aid, the instruction, or the example of others. But it is certain, that the very humblest individual in the country—he who knows the least and fares the worst—owes far more to society than he does to himself. The good institutions, and all that is excellent in society, are the result of the labors of the wise and the good through many ages,—from the very beginning of civilization indeed; for nations are the scholars and imitators of nations, just as men are the scholars and imitators of men.

Thus, when we reflect duly, we discover that every man who earns his bread in society, is indebted to society for it. Take a man who digs the ground:—how did he find out that digging the ground would make it more fertile? Where did he obtain a spade? Who taught him how to use it? Who instructed him as to the roots which it is best to plant, and the seeds which it is best to sow; or who told him the times at which the planting and

the sowing could be done to the greatest advantage? Certainly not himself; for before any man could have found out the way and the time of doing the very simplest thing that the humblest laborer has occasion to do, the term of his life would have been out, and he would have been in his grave. Indeed his term would have been but short, for he would have died of hunger before he had been long in existence.

This debt to society is not confined to those in humble life; for the higher the station, the debt is the greater; because all civilization, all knowledge, and all enjoyment, except those which man has in common with the beasts, had their origin in society, and were by society brought to the condition in which we find them. We are, in fact, debtors to society for the wisdom and the improvements of more ages than we have years to spend in it. That wisdom and those improvements are talents committed to our care, and if we do not hand them down to the generation which is to come after us, in a more valuable condition than we ourselves received them in, we are shamefully ungrateful to our fathers, and cruelly unjust to our children.

The common boast of a rich man that, "he can pay his way, and is obliged to nobody," is a very silly boast; for the man is a debtor to others for all that he possesses; and of course the larger his possessions are, the more he is in debt. That debt is, however, due only to society generally; and therefore no individual member of society is entitled to ask payment of it. It is not a debt which can be paid with money. It must be paid in conduct; and in doing those particular duties which belong to his station.

In like manner, the man who is destitute, who

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possesses nothing, and has nothing to do, is not independent of society, for to society he is indebted for his very powers of doing; and if he has had opportunities of turning those powers to account, and has neglected them, he is more deeply and more criminally a debtor. However wretched he may feel, or may be in reality, he is still much better than if he were not in society; for then he would be without the abilities of doing; whereas, the very worst that can happen in society, is being without the opportunity or the will of turning those abilities to account. It is not always very easy to distinguish between the want of opportunity and the want of will, because there is a will to find opportunity, as well as a will to improve it, when it is known: and in both cases, the proverb, "where there is a will there is a way," holds true.

THE ACTING OF CHILDREN.

The acting of children in adult characters is of very ancient date. Labathiel Pavy, a boy who died in his thirteenth year, was so admirable an actor of old men, that Ben Jonson in his elegant epitaph on him, says, the fates *thought him one*, and therefore cut the thread of life. This boy acted in "Cynthia's Revels" and "The Poetaster," in 1600 and 1601, in which year he probably died. The poet speaks of him with interest and affection

Weep with me all you that read
  This little story;
And know for whom a tear you shed
  Death's self is sorry.

'T was a child that did so thrive
  In grace and feature,
That heaven and nature seemed to strive
  Which owned the creature.

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Years he numbered scarce thirteen,
When fates turned cruel,
Yet three filled Zodiacs had he been
The stage's jewel.

And did act, what now we moan,
Old men so duly,
As sooth, the Parcæ thought him one,
He played so truly.

LAPLAND SKATE RUNNERS.

The Laplanders are a quiet, good sort of people. As they never steal, locks and bolts are not used among them. You may leave any thing in the open air, safely. They are not quarrelsome, and though the men carry knives in their belts, they never stab each other. I observed, however, that several of them understood kicking and pulling hair tolerably well.

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The Laplanders do not make brave soldiers, but they bear the cold, heat, hunger and fatigue, with great patience. They are seldom troubled with any disease but the rheumatism, or something of that kind. For any pain in the limb, they put on fire, and raise a blister. For all the other complaints, they drink brandy and pepper, or brandy and gunpowder. This is a terrible dose, to be sure; but it always cures them, they say. They never take cold. Blindness is common among them, owing perhaps, to the glare of the snow, or their smoky tents.

Drunkenness is their chief fault. I knew one family to drink a barrel of brandy in four months. They buy it of the merchants. If a Laplander earns twenty dollars by fishing, he will perhaps buy a few dollars worth of cloth, and drink out the rest during the week. These people never refuse brandy. I had some with me, that was very strong; they made wry faces at drinking it, but always wanted more.

By the 10th of October, the country is covered with snow. At this season the bears are troublesome. They come out from their lurking places, and if they can find a horse or a cow, they kill and drag it to some den or cavern, and live upon it during the winter. The Laplanders use the rifle in hunting bears. Their powder is coarse; and the bullet is no bigger than a pea. The hunter must get pretty near to his game, therefore; which makes it dangerous work to pursue these animals. Of course, a Laplander is proud of killing one. The people say, the bear has ten men's strength, and twelve men's sense; and they think it understands their speech. I once knew a Laplander to chase

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a bear to shoot at him; his rifle missed fire. The bear turned round, and was about to spring upon the man. "You ought to be ashamed, you great rascal," said the hunter, "to bite a man with a poor rifle." Whether the bear thought this remark reasonable, or was frightened, I do not know but he ran away, and gave the hunter no more alarm.

As soon as the snow comes, and the surface is glazed and hard with a few days' cold, the Laplander puts on his snow-skates. These are made of wood, and are very narrow, but seven feet long, or more. They travel upon them with such speed, over mountains and rivers, and through the woods, night and day, that in old ignorant times, travellers took them for goblins. They chase the reindeer with them; and in deep snow, where the deer breaks through with his sharp hoofs, they often overtake him. They will go fifty miles in a day. They find it rather hard work to climb mountains on their skates; but coming down is easy enough. They place themselves in a crouching posture, with their knees bent, and body inclined backward, holding only a staff.

ABBREVIATIONS AND SIGNS.

Abbreviations and Signs, are generally used to express in small, that which is in itself large, or in short, that which is in itself long. In this way we have London on a pocket handkerchief, England on a bit of paper, or the whole surface of the earth and all the stars in the heavens, on the surface of two little globes, a foot or eighteen inches in diameter. So also we have the whole history of the

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world in a small book, which we can carry in our pocket; or the principal events in a table, which we can examine at a glance.

The words of language, to which we owe so much of our knowledge and enjoyment, are nothing but signs and abbreviations. It would take years to know and months to tell, in detail, all that we mean by the short word "*man;*" and yet we understand it whenever we hear it spoken or see it written.

The abbreviations and signs of speech are common to us all, learned and unlearned. But there are particular abbreviations and signs, belonging to particular branches of knowledge, or science; and these, though they are of very great advantage to those who do know them, are puzzling to those who do not, just in the same manner as a man who knows no language but French is puzzled with English.

Those signs are the Alphabets of the sciences, just as letters are the alphabets of languages; and it is just as impossible for any one to know the science without first knowing its alphabet, as it is for any one to be able to read a book without knowing the A, B, C. Learning the A, B, C, is knowing the sound of the letters,—that is, the connexion or *relation* between words that are *heard* and words that are only *seen*. There is no natural relation between seeing and hearing; and therefore the A, B, C, is arbitrary, or just what they who use it choose to make it, — consequently every body must be taught it.

It is nearly the same with what may be called the "alphabets" of all the sciences; and in science, as well as in language, we very soon learn to read and understand, when we once know our A,

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B, C, or letters. The learning of their letters being the first and humblest lesson of children at school, persons who are farther advanced in life think it beneath them to learn alphabets; and, from that silly prejudice, they remain ignorant of the sciences to which those alphabets are the keys.

Yet those alphabets are the most wonderful of human contrivances. The steam engine and gas light are mere trifles compared with the A, B, C.

The figures 1, 2, 3, &c. which are the alphabet of numbers, are very curious; and enable us to do that in so many seconds, which, if we had no such contrivance, we could not do in as many centuries. The distance of the sun from the earth is about 190 millions of half miles, and half a mile is about a thousand paces; five miles an hour is fast walking, and the paces then are as fast as one can count distinctly. At that rate, though the first man had begun the journey, or the counting, at the moment of his creation, and he and his posterity continued at it twelve hours every day, it would have been more than 200 years after the birth of Christ before they had finished the task. By means of the alphabet of numbers, any body can do it as fast as three 0's can be written. The half miles are 190,000,000; the paces in half a mile 1000: we have only to add three 0's to the first of these, and we have the whole number of paces,—190,000,000,000.

The alphabet of numbers does not, however, express the relations of numbers, and so we must have other signs for these; and, as the figures which stand for the names of numbers are different from the words, or names, which are the names of things, there are also different signs for the principal relations of numbers. But as the value of every thing that can be valued is reckoned in num-

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bers, the relations of numbers are of very general use; and as the signs of those relations are the shortest means of expressing them, every body should be acquainted with them.

These signs are sometimes called "*Algebraical*" signs, and the name is far from being an improper one. "*Al*" means "the," and "*jabr*" means "to consolidate," or bring together into little space, so that the whole may be seen at once; and thus "Algebra" means "the expressing of the greatest meaning by the fewest signs."

ANECDOTES OF INSECTS.

The grubs of some two winged flies and of wasps, bees, ants, and ichneumon flies, do not change their skins; but spiders and other allied tribes though they exhibit no other appearance of larvæ, moult frequently during their growth. Goldsmith, among other curious mistatements respecting a house-spider which he himself observed, asserts that it "lived three years, every year it changed its skin, and got a new set of legs: I have sometimes plucked off a limb, which grew again in two or three days." The fact is, that few spiders live one year, much less three; and all their changes of skin are gone through in a few months, and their acquiring new legs for mutilated ones takes some weeks. It is probable, indeed, that Goldsmith never thought of ascertaining the identity of this spider; if the whole story be not a mere fancy, like his assertion that spiders, "when they walk upon such bodies as are perfectly smooth, as looking-glass or polished marble, squeeze a little sponge which grows near the extremity of their claws, and thus diffusing a glutinous substance, adhere to the

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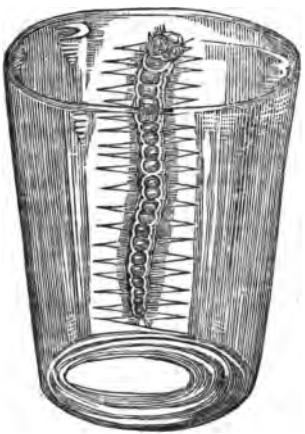
surface till they make a second step." Neither spiders nor any insects with which we are acquainted can thus produce gum from their feet to aid them in walking upon glass, though the house-fly can walk thus by causing a vacuum between its feet and the glass, as we shall subsequently describe at length. But the spider and all caterpillars can only climb in such cases by constructing a ladder of ropes, as is represented by Rösel in the instance of the goat moth caterpillar.



Goat moth caterpillar escaping from a drinking glass, by spinning a ladder of silken ropes.

One of these caterpillars, which we possessed, made its escape in a manner much more unexpected, if not so ingenious, by means of its great muscular power, in which, it is not a little singular, that insects, as Baron Haller remarks, appear to excel in proportion to their diminutiveness. Of this we

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have a remarkable example in the common flea, which can draw seventy or eighty times its own weight. The muscular strength of this agile creature enables it not only to resist the ordinary pressure of the fingers in our endeavors to crush it, but to take leaps to the distance of two hundred times its own length; which will appear more surprising when we consider that a man, to equal the agility of a flea, should be able to leap between three and four hundred yards. The flea, however, is excelled in leaping by the cuckoo-spit frog-hopper, which will sometimes leap two or three yards, that is, more than two hundred and fifty times its own length; as if, (to continue the comparison) a man of ordinary stature should vault through the air to the distance of a quarter of a mile.

EDMUND BURKE.

The private life of Edmund Burke cannot fail to excite a deep interest in those who know and appreciate the exceeding value of the social virtues. While his public life claims our admiration and respect, his private life compels irresistibly our love and our esteem.

The affectionate friendship and regard of men of such sterling value as the Marquis of Rockingham and Lord Charlemont were not lightly nor unworthily bestowed on Burke, and afford no slight testimony of his private worth; and the high estimation which he obtained with Johnson and Parr, Fox, Wyndham, and his numerous intimates, combined with the tone of respectful consideration in which he was invariably spoken of by those politically opposed to him, including Pitt, Wilberforce, Thurlow, and others, serve to place his public character eminently high.

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In his intercourse with his own family, however, it was, that the real excellences of his heart shone forth. As a son, his respectful attention and submission to parental authority and advice, even at a period of life when most men either wholly throw off, or at best treat lightly, such restraint, appears, indeed, to have been admirable. As a husband, his attachment to his excellent and accomplished wife was most ardent, and truly she was in every respect highly deserving of it. Her best eulogium was pronounced by him when he declared that amid the troubles and anxieties of his political life he

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never failed to find alleviation for all his cares in his home—"they vanished the moment he entered under his own roof." Could higher testimony be borne to the worth of a wife? As a father, his affection for his son appears to have been unbounded, and the poignancy of his sorrow at his death was consequently most intense; indeed, there can be little doubt that it accelerated the termination of his own life; for, though after the first few days of the most extravagant evidence of mental anguish, he appeared to recover some composure, yet long afterwards circumstances apparently trivial would call forth a reiteration of his sorrow. A feeble old horse, which had been a great favorite with his son, and his constant companion in all rural journeyings and sports when both were alike healthful and vigorous, was, in his age, and on the death of his master, turned out to take the run of the park for the remainder of his life, with strict injunctions to the servants that he should neither be ridden nor molested by any one. While walking one day in solitary musing, Mr. Burke perceived this worn out servant approach close up to him, and at length, after some moments spent in viewing his person, followed by seeming recollection and confidence, the poor animal deliberately rested its head upon his bosom. The singularity of the action itself—the remembrance of his deceased son, its late master, who occupied much of his thoughts at all times, and the apparent attachment and almost intelligence of the poor brute, as if it could sympathize with his inward sorrows, rushing at once into his mind, totally overpowered his firmness, and throwing his arms over its neck, he wept long and loudly.

Many things are related of Burke, showing the playful and affectionate intercourse he continued

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through his whole life to keep up with his brothers and the other members of his family. Richard Burke was a man of considerable talent and wit, and it was his habit to read the newspaper aloud at the breakfast table every morning, making such comments as his whim and drollery suggested. On one occasion, when the paper proved unusually barren of subjects for his genius to exercise itself upon, he turned to his brother's speech in the House of Commons the preceding night, and having read a part of it correctly, he suddenly introduced something of his own of quite an opposite nature to the report, and continued apparently to read with a perfectly grave face, until interrupted by his brother Edmund, with the exclamation—"This is all wrong, Dick; they quite mistake me." A silent assent was nodded by the wag, who, nevertheless, continued his teasing career of invention. "These people," again exclaimed Burke, "are either malicious or foolish, to make me say such things." Richard, however, unmoved by the simple perplexity of his brother at the stupidity of the reporters, went on with something still more outrageous, till finally his gravity gave way at the solemn assurance, "I declare to God, Dick, I said nothing of the kind."

He delighted in the society and conversation of children, whom it was his favorite occupation to instruct and amuse, and so successful was he in rivetting their attention and affections, that many boys, who were in the habit of spending their vacations with him, declared when grown to manhood they looked back to the period of their occasional sojourns with him as the happiest and most interesting of their lifetime, and that they derived more pleasure from the amusing stories which Mr. Burke told in his rural walks than from any thing they have

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since read. Of this amiable trait, a circumstance, which occurred during one of his visits to Ireland, is very characteristic. Being on a visit at the house of his sister, Mrs. French, near Loughrea, and happening to stroll into the village, on a market-day, in the evening, after an early dinner, his attention was attracted by a group of children, gazing with intense admiration on the exterior of a kind of puppet show, a mode of theatrical exhibition. The anxious curiosity and the lamentations of the youthful group at their inability to gratify it, induced him to bargain with the proprietor for admission of the whole, when some of his friends, coming up at the moment, insisted upon exercising their privilege as his entertainers, in paying the showman. "No, no, my dear friends," said he, "this pleasure must be all my own; perhaps I shall never again have the opportunity of making so many human beings happy." Of the principle of benevolent and kindly feeling which appeared to guide him in the every-day transactions of life, the following may serve as an example. A dispute occurring with the lord of the manor in which his property at Beaconsfield was situated, about the right of ownership in a number of oak trees which stood outside of his park-paling, it was referred, the value being considerable, to the decision of a court of law. So confident was his adversary of his success, that he had directed the bell-ringers of the village to be in readiness the moment the news arrived, to celebrate his victory. The result, however, proved directly contrary to what he expected; and Mr. Burke's servants, thinking their master entitled to the same demonstration of village joy, were proceeding to express it, when, hearing what was going on, he gave peremptory orders to desist. "It is bad

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enough to quarrel with a neighbor," said he, "without attempting to triumph over him;" and added, when the intention of the other was urged, "what *he* would have done is of no consequence; I have simply to consider what *I* ought to do."

We cannot conclude our notices of this great man better than by transcribing the tribute paid to his memory in a Paris journal of the day; it was written by the talented M. Cazales. "Died, at his house, at Beaconsfield, with that simple dignity, that unostentatious magnanimity, so consonant to the tenor of his life and actions, the Right Honorable Edmund Burke. There never was a more beautiful alliance between virtue and talents; all his conceptions were grand—all his sentiments generous. The great leading trait of his character, and that which gave it all its energy and its color was that strong hatred of vice, which is no other than the passionate love of virtue; it breathes in all his writings; it was the guide of all his actions; but even the force of *his* eloquence was insufficient to transfuse it into the weaker or perverted minds of his contemporaries. This has caused much of the miseries of Europe—this has rendered of no effect, towards her salvation, the sublimest talents, the greatest and rarest virtues that the beneficence of Providence ever concentrated in a single character for the benefit of mankind. But Mr. Burke was too superior to the age in which he lived. His prophetic genius only astonished the nation which it ought to have governed.' O'G.

POISONS OF THE ANCIENTS.

At the College of Physicians, London, Sir Henry Halford lately read a curious paper, in which he

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investigated the causes of the death of certain celebrated characters of antiquity, with especial reference to the knowledge of poisons possessed by the ancients. Sylla, he observed, died in consequence of the rupture of an internal abscess, through an excess of rage, which, according to Valerius Maximus, produced a violent vomiting of blood, and death. Crassus, the eminent lawyer, and friend of Cicero, died of pleurisy; and Sir Henry remarked, that the course of treatment for this disorder prescribed by Celsus, and in use at the time, namely, bleeding, cupping, and blistering, was so similar to that pursued at the present day, that nothing was probably left undone that could have saved his valuable life. Pomponious Atticus, whom Cicero loved as a brother, and who was on friendly terms with all parties in the disturbed times in which he lived, was said to have died of a fistula in the loins; it was probably, Sir Henry thinks, a dysentery, ending, as that disorder commonly does, in an affection of the lower bowels. He had recourse to starvation, a very common expedient amongst the Romans, and died in ten days, aged seventy-seven. The latter end of Socrates was brought about by the common mode of despatching persons capitally convicted at Athens, namely, by a narcotic poison; but neither Xenophon nor Plutarch tells us the species of poison. The poisons of this class known to the ancients were aconite, white poppy, hyoscyamus, and hemlock. The black poppy might be the Theban drug. The hyoscyamus was used at Constantinople, and was very likely the nepenthe spoken of by Homer. But most probably the poison administered to Socrates was the same given to other condemned criminals, viz. *cicuta*, hemlock. Juvenal attributes his death to hemlock. Whatev-

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er may have been the species of poison, it was one of weak and slow operation; for the executioner told Socrates that if he entered into earnest dispute, it would prevent its effect, and it was sometimes necessasy to repeat the dose three or four times. Its operation was gradually to produce insensibility, coldness of the extremities, and death. What was that poison by which Hannibal destroyed himself? It is improbable we shall ever know. Modern chymistry has discovered a variety of subtile poisons that might be introduced into a ring, and, under certain circumstances, destroy life. One drop of prussic acid might produce paralysis, and, if taken into the stomach, would instantly arrest the current of life. But it is not likely that the Carthagenians were acquainted with prussic acid. Lybia most probably produced poisons sufficiently subtile and destructive to accomplish the fatal purpose of Hannibal. As to the report of its being bullock's blood, that, Sir Henry Halford observed, must be a fable, as well as in the case of the death of Themistocles, for it is well ascertained that the blood of that animal was not poison. An accomplished nobleman had told Sir Henry that he had been present at a bull-fight in Spain, when, after the matador had killed the bull, a person ran up, caught the animal's blood in a goblet, and drank it off, as a popular remedy for consumption. With respect to the poison with which Nero destroyed Britannicus, comparing the account given by Tacitus, with the effects of laurel-water, Sir Henry was disposed to think that this was the identical drug.

Early Hours. Since the introduction of candles, luxury has increased. Our forefathers rose with the lark, and went to bed with the sun.

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GENIUS AND INDUSTRY.

Whilst we believe that education is the greatest gift that can be conferred on a human creature, we are not sanguine enough to expect that its more general diffusion will increase the number of men of genius. There is a perversity in human nature which makes us relax our efforts at the moment when they might be rewarded with the most splendid success. It does not follow that a shepherd-boy, who passes his long day on the side of a hill, and who acquires the principles of mechanics, or forms for himself a plan of the stars, shall make proportionate advancement if full opportunity of study be afforded to him.

Nor does it follow that a young man who teaches himself to read by the light of a shop window in the street, shall become a learned man when admitted to libraries and encouraged by applause.

We do not think the illustration a correct one, which represents the scholar as like the weary traveller who plods on contentedly through woods and over irregular ground which conceal the prospect, and who faints when he has ascended to the top of the hill and sees the whole extent of the road before him.

The truth seems rather to be, that energy of mind, like strength of body, must be acquired by exercise, and that the consciousness of desert in encountering difficulties, must be felt to enable us to accomplish any great work. Sir Joshua Reynolds has happily expressed this:—

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"It is not uncommon to see young artists, whilst they are struggling with every obstacle in their way, exert themselves with such success as to outstrip competitors possessed of every means of improvement. The promising expectation which was formed on so much being done with so little means, has recommended them to a patron, who has supplied them with every convenience of study; from that time their industry and eagerness of pursuit have forsaken them; they stand still and see others rush before them.

"Such men are like certain animals, who will feed only where there is little provender, and that got at with great difficulty through the bars of a rack, but refuse to touch it where there is an abundance before them."

THE PROGRESS OF AMERICA DURING THE LAST CENTURY.

From the elevated position we now occupy, let us turn our eyes back on the history of the past century, to observe the progress of America since the birth of Washington, and the influence of his life and character on the destinies of his country and of mankind. What *was* his country? Eleven small British colonies (for Georgia had then no existence, and Delaware no separate name) were scattered along the shores of the Atlantic, within the present limits of the United States. They extended inland only to a short distance, their remotest outposts hardly reaching the foot of the Alleghany Mountains. Behind them was an unexplored wilderness, from the recesses of which, savage tribes, trained to war and plunder, were ever ready, at the instigation of an ambitious chief, or the temp-

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tation of a favorable opportunity, to spring forth on their inhabitants, without warning and without mercy. On the north and on the south were the colonies of France and Spain, both ancient rivals of Great Britain, and, according to the universal opinion of that age, its natural as well as hereditary enemies; so that every contest between those nations brought war home to the doors of the colonists, who thus suffered from all the intrigue of European policy. From a "Report of the Lords of Trade," it appears that wool, flax, and hemp were raised in small quantities by the farmers, and wrought into coarse cloth and ropes, in their own dwellings, for their own use. Besides these household manufactures, and a number of establishments for refining sugar, for distilling, and for tanning, there were several forges and furnaces for making iron, and in all America, one slitting mill, one nail mill, and one paper mill, the last of which produced paper enough to sell for nearly a thousand dollars a year. The inhabitants of the northern colonies also had recently began to make hats, and had even exported some, of which great complaints were made by the hatters of London, as interfering with their business. Parliament "diverting the thoughts of the colonists" from manufacturing and exporting the produce of their soil, enacted under severe penalties, that neither hats nor wool, nor any manufactures of wool produced in America, should be water-borne, or laden in any vehicle or on any animal for transportation, even within the colonies themselves; and that every slitting mill should be abated as a common nuisance.

Only two of the colonies had the right of choosing their own chief magistrates. The others had governors appointed in England, either by the crown

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or by the proprietors of the colony, who possessed also respectively the right to annul, within a limited time, any laws passed by the Colonial Assemblies. The colonies were not bound together by any other tie than their common allegiance tó the British crown.

Such was America; a number of feeble, scattered colonies, surrounded by enemies, disunited, dependent. Possessing, indeed, in its habits of industry and enterprise, in its domestic, civil, literary, and religious institutions, the germs of its subsequent greatness, but faintly developed, crushed beneath the oppressions of the colonial system, and in this part of the country still languishing under the influence of that connexion of civil and ecclesiastical power, which is every where degrading to religion, and dangerous to liberty. Such was America! Look on it now. What do you behold? One great, united, powerful, prosperous, free people, without a master, without an enemy, without a rival. The Alleghanies, which were then your utmost limits, are now in the midst of your population; the vast region beyond them, at that time a wilderness, is crowded with villages, and towns, and cities, swarming with inhabitants, burdened with plenty; the Mississippi, whose origin and course were not then known, is now a common highway; and the still more remote territory, then unexplored, may I not say undiscovered, is now entirely subjected to your laws. Your manufactures, relieved from the monopoly of the colonial system, have extended with inconceivable rapidity; your commerce peoples the ocean; enterprise and industry in every pursuit are all unshackled; and under the protection of a free government and equal laws, the institutions then

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so feebly developed, have shut up, and spread abroad, and covered the whole land, and blossomed and brought forth fruit abundantly—the fruit of knowledge and virtue.

But general expressions can give no idea of our progress. Fancy itself flags, and lingers, and halts behind the truth. Look only at our population. A hundred years ago, it did not exceed 700,000. At this day, it is more than 13,000,000. Consider, too, the difference between our progress in this respect, during the first half and the last half of the century just ended. The first fifty years added to the existing population 2,000,000, making in all nearly 3,000,000 of inhabitants in 1782. The last fifty years have added to that number more than 10,000,000. The whole shipping of America a century ago, was not 100,000 tons. At present, though the revolutionary war almost swept it from the ocean, and it suffered greatly in the last, it approaches 2,000,000 tons. In the whale fishery alone, 1,300 tons only of shipping were then employed, and it now gives occupation to 90,000 tons. Our whole exports and imports, which did not exceed one million sterling, have increased twenty-fold. There are no sufficient data for estimating our progress in other respects; but who can look around him without perceiving, that in domestic comfort, in internal improvements, in wealth, in knowledge, and in all the arts of life, it has been far more rapid even than in population or in trade; and that we have advanced with constantly accelerated speed during the whole period. It began with achieving the work of a century in a generation, and it seems to end with crowding the work of generations into single years.—*Gray.*

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LETTER FROM AN EMIGRANT.

A letter from a person who lately emigrated from Bristol to the United States of America, recently appeared in a Leeds newspaper, and from it the following extract is given, in the expectation of its being interesting to many of our readers.

"Though greatly reduced by my long voyage, it has been of great service to my health. I am now perfectly well, and have nothing of that cough I have been subject to. My beloved wife and dear children are all very well, and look more healthy than before we left England. This is the case, likewise, with all our friends and their children (three families from Bristol, who removed about the same time.) We are all very comfortable, and often meet together, and discuss, contrast, and compare things in America with those in England; on some points we agree in our likes and dislikes, and on some points differ very widely. On all material points, however, we fully agree—that this is the best *poor man's country;* the best to bring up and launch out a family; the best for persons of small incomes (if they can accommodate themselves to circumstances, and depend upon their own resources;) servants ('helps') may be had here, board and wages both considered, at an expense but little more than in England; but then the maid is as good as her mistress, the man as his master.

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"Though to parents coming out here, if they have the common feelings of our nature, it must be a sacrifice of the pleasures of friendship, and at first an endurance of many inconveniences, yet their children will bless them for their self-denial; and I believe, in ninety-nine cases out of a hundred, parents will feel thankful they had sufficient nerve to come to this country. Parents have no difficulty in bringing up their children, and placing them out in business; nor need they fear their future prosperity. Here, also, there is far less temptation to vice of every kind—sobriety and good order prevail in a way unknown in England. The direct and indirect effects of temperance societies are truly astonishing. This true happiness may be found in England; but I believe the sum of happiness in America is infinitely greater than in England. The chief cause of sorrow and distress in England is *unknown here!* Here there is not the garb of poverty, nor the look of distress.

"It was a fine morning; I walked five miles before breakfast on a very good tow-path, with the canal on my right, and the Mohawk River on my left, with a pretty fertile country and varied scenery. It reminded me strongly of Hay, my native place. We met a very agreeable English gentleman on the aqueduct over the Mohawk. He had travelled extensively through the States, and was then on his return to England, with a view of bringing his family over. He was highly pleased with the country and the people, and said, 'the English will never believe America to be so happy and prosperous a country, unless they see for themselves.' This reminded me of what an English gentleman at New York said to me. He inquired if I intended to send a full account home of what I saw.

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'Certainly,' was my reply. 'And do you,' he said, 'expect they will believe you?' 'Surely they will.' 'Take my word for it,' he said, 'they will not believe the one-half of what even you say.'

"We arrived at Schenectady about two o'clock; it is a pretty good town. There is a rail-road from Albany to this place, for steam-coaches, which go 14 miles an hour. Wednesday, at daylight, came in sight of Utica. This is a very handsome town, abounding with well-built churches, of the various denominations, with spires. I do not know in England so regular and good a town—not the semblance of poverty or poor-houses. I will give you present prices of provisions:—Fowls, 12½c. (a cent is a halfpeny) per couple; turkeys and geese, 25c. each; venison, very fine, 1¼c. per lb.; beef, veal, and pork, 3c.; potatoes, 25c. per bushel, very good, but not so mealy as the English; butter, always good, 12½c., now considered very dear; apples, 25c. per bushel; cider, 1¼ dollar per barrel of 32 gallons; flour, now high, 4½ dollars per barrel; corn, 20c. per bushel. The horses are generally good, and the oxen are fine large beasts for labor. Self supporting, or manual labor schools, are already established in many parts of the Union, and promise to be the means of diffusing more good than any other society established in modern times. These schools are promoted by the Baptists, who are a very numerous sect in America. I would just observe that young men desirous of being educated for the ministry, as well as others entering these schools, obtain a good classical and religious education. By their laboring at some trade on the premises four hours a day, they pay for their board, and one hour more for their education. Mechanics in this State get well paid. A working jeweller in

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the town of Newark gets 9½ dollars per week, besides board and lodging; and common carpenters and coopers get 20 dollars a month, besides board and lodging. When at New York, my friend Mr. Jennings told me, if 500 young women were to come over, they would immediately get into situations there: were many thousands to come over, they would find sufficient employment in the States, and get well paid for their services."

CAMPHOR.

Camphor, which is so much used for medical purposes, is likewise extensively employed in the composition of varnishes, especially in that of copal. It is the peculiar product of the root of a species of laurel, (*laurus camphorata*,) a tree growing in China, Japan, and several parts of India. The leaves of this plant stand upon a slender footstalk, and have an entire undulated margin running out into a point. Their upper surface is of a lively and shining green; the under part is of a yellower green, and of a silky appearance; a few lateral nerves curve towards the margin, frequently terminating in small worts or excrescences—a circumstance peculiar to this species of laurel. The footstalks of the flowers do not come forth until the tree has attained considerable age and size. The flower stalks are slender, and branch at the top, dividing into very short stems, each supporting a single flower. This is white, and succeeded by a shining purple berry of the size of a pea. It is composed of a small kernel enclosed in a soft pulpy substance —having the aroma of cloves and camphor. The bark of the stem of the tree is outwardly somewhat rough; but on the inner surface it is smooth and

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mucous, and therefore readily separated from the wood, which is dry and of a white color. Some travellers affirm that old trees contain camphor so abundantly that on splitting the trunk it is found in a form of large tears, so pure as not to require rectification. The usual method, however, of obtaining this substance is from the roots, pieces of which are put into an iron vessel furnished with a capital, or large head; this upper part is internally filled with cords of rice straw; the joinings are then luted, and the distillation proceeded upon On the application of heat the camphor sublimes and attaches itself to the straw within the head. The Dutch purify the substance thus obtained by mixing an ounce of quick lime with every pound of the camphor, and subjecting it to a second sublimation in large glass vessels.

Camphor is well known as a white friable substance, having a peculiar aromatic odor, and a strong taste. Some chymists consider it as a concrete vegetable oil. It melts at a temperature of 288°, and boils at 400° Fahrenheit. Its specific gravity is less than that of water. It is very inflammable, burning with a white flame and smoke, and leaving no residue. Alcohol, ether, and oils dissolve it. The only indication whereby it appears that water acts upon camphor is that of acquiring its smell; it is said, however, that a Spanish surgeon has affected the solution in water by means of carbonic acid. Camphor may be burned as it floats on the surface of water. It is not altered by mere exposure to atmospheric air, but it is so extremely volatile that if in warm weather it is placed in an open vessel it evaporates completely. It dissolves in alcohol, and like the resins, is immediately precipitated again by the addition of water.

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Camphor has been found to exist in numerous plants whence it may be obtained by distillation. Neumann and other chemists extracted it from the roots of zedoary, thyme, sage, the inula helenium, the anemone, the pasque flower, and some other vegetables. Experiment has shown that the plants whence it is extracted afford a much larger quantity of camphor when the sap has been suffered to pass to the concrete state by several months' drying.

This substance was very early known to the Eastern nations; it was introduced into Europe by the Arabians, but was entirely unknown to the ancient Greeks and Romans.

LOSS OF WEIGHT IN COOKING ANIMAL FOOD.

It is well known that, in whatever way the flesh of animals is prepared for food, a considerable diminution takes place in its weight. As it is a subject both curious and useful in domestic economy, we shall give the result of a set of experiments, which were actually made in a public establishment; they were not undertaken from mere curiosity, but to serve a purpose of practical utility.

28 Pieces of Beef, weighing 280 pounds, lost in boiling, 73 pounds 14 ounces. Hence the loss by beef in boiling was about 26 pounds and a half, in 100 pounds.

19 Pieces of Beef, weighing 190 pounds, lost in roasting, 61 pounds 2 ounces. The weight of beef lost in roasting appears to be 32 pounds in each hundred.

9 Pieces of Beef, weighing 90 pounds, lost in

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baking, 27 pounds. Weight lost by Beef in baking, 30 pounds in each hundred.

27 Legs of Mutton, weighing 260 pounds, lost in boiling, and by having the shank-bones taken off, 62 pounds 4 ounces. The shank-bones were estimated at 4 ounces each, therefore, the loss in boiling was 55 pounds 8 ounces. The loss of weight in legs of Mutton in boiling, is 21 pounds and one-third in each hundred.

35 Shoulders of Mutton, weighing 350 pounds, lost in roasting, 109 pounds, 10 ounces. The loss of weight in shoulders of Mutton, by roasting, is about 31 pounds and one-third in each hundred.

16 Loins of Mutton, weighing 141 pounds, lost in roasting, 49 pounds 14 ounces. Hence loins of Mutton lose, by roasting, about 35 pounds and a half in each hundred.

10 Necks of Mutton, weighing 100 pounds, lost in roasting, 32 pounds 6 ounces.

From the foregoing statement, two practical inferences may be drawn. 1st. In respect of economy, that it is more profitable to boil meat, than to roast it. 2dly, Whether we roast or boil meat, it loses, by being cooked, from one-fifth to one-third of its whole weight.—*Philosophical Magazine.*

MUSCULAR STRENGTH OF INSECTS.

The following experiment relative to the muscular strength of a caterpillar, was made by Kirby and Spence: "We put the caterpillar of the goat-moth under a bellglass, which weighed nearly half a pound, and of course more than ten times the weight of the insect; yet it raised it up with the utmost ease. We then placed over the glass the largest book which we had at hand—'Loudon's Encyclo-

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pedia of Gardening,' consisting of about 1500 pages of strong paper, and weighing four pounds; but this did not succeed in preventing the escape of the animal, which raised the glass, though loaded with the book, nearly a hundred times its own weight,

and made good its exit. The multiplicity of its muscles, two hundred and thirty-six of which are situated in the legs alone, will enable us to understand how this extraordinary feat was performed. Even this power of muscle, however, would doubtless have been unavailing in raising the loaded glass, except in connexion with two favorable circumstances under which the experiment was performed, and which are necessary to be borne in mind to render the operation perfectly credible:—1st, that the wedge-like form of the caterpillar's head, in connexion with the peculiar shape of the glass, enabled it to lift it;—and 2d, that, one side of the glass resting on the table, the insect only bore half the weight of the glass and book.

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TOOTHACHE.

"When fevers burn and agues freeze us,
Rheumatics gnaw and colicks squeeze us,
Our neebors sympathize to ease us,
Wi' pitying moan—
But thou the hell o' a' diseases,
They mock our groan." BURNS.

The toothache is rendered more distressing, if not more acute, by there being no commiseration for the wretchedness it occasions. The belief in this, and a keen recollection of bodily and mental sufferings, have produced the following little narrative:—

Some years ago, a tremendous tooth, with three enormous prongs, confined me to my room, and irritated me to a state little short of distraction. With my head tied up in a bandana handkerchief, both hands on my afflicted jaw, I sat swaying my body to and fro, as if endeavoring to calm a fractious infant; at other times I stamped about like a lunatic, or plunged on my bed like a frog swimming. Being at length reduced to a state of exhaustion, I was anxious to retreat from all intercourse with the world; yet knock after knock at the door continued, as if only to increase my already excessive nervous irritability. Many of the persons I had no desire to see, but some were those interwoven with my

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professional pursuits, and I was compelled to be at home. I had to account for my disconsolate appearance—to describe my tormenting pangs, till I was weary of speaking upon the subject. To all of my fervid descriptions, I received the cold remark, and the chilling advice, that it was *only* the toothache, and that I had better have it *extracted.* All this time, the salivary glands were pouring their fluids into my mouth, the gastric juices were wasting their powers, and I was in a paroxysm of excruciating anguish. It was astonishing how persons could calmly behold such a complication of miseries. Nothing could be eaten; slops became offensive; the sight of a spoon frightful; and a basin revolting as a perpetual blister. Even the air could not be taken!—it was too much for the petulance of my capricious tooth. On it raged, as if torments were its delight. In all my reading, I never met with any author but Burns who had a proper idea of the toothache. He wished his enemies to have it for a twelvemonth. Oh dear! He must be more or less than man who could endure this. He must despair and perish.

How true it is, that out of evil often some good will spring; for while I was enduring this thumbscrew on my gums—this gout in my jaw—this rack of nerves—this destroyer of brains—amid this desolation I acquired much useful information respecting the toothache. One friend informed me that half the suffering was occasioned by a nervous irritability; for, if I went to a dentist with a determination to have the tooth extracted, the moment I entered the door the tooth would cease to give me pain. He had proved it more than once.

Another friend smiled at my deplorable situation, and laughed at my desire to retain in my mouth such a *thing*, that had ceased to be a tooth; it was

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a mere stump, with a carious tripex fang; worse than useless; it was positively injurious. If the case were his, he should give such tenant immediate notice to quit. With a pair of pincers, he would serve the ejectment himself, as an empty house was preferable to a bad tenant.

Another friend requested me to be careful in selecting an operator on my tooth, for that he went to a dentist once, under anguish scarcely endurable, to have a large double tooth like mine extracted. He seated himself in a chair, and was told to hold fast by the frame-work of the seat, to prevent being hoisted up by the lever power in the hands of the operator. All was properly arranged, the instrument in, and a tooth drawn; but, unfortunately, the fellow had taken the wrong tooth out, being the only one left to meet another in the opposite jaw, to enable my friend to masticate his food. Bad as this was, he found it must be endured, because the tooth could not be replaced, and because a portion of the jawbone had been torn away with the tooth. Miserable situation! The pain redoubled it violence, and he resolved to have the tormenting fang extracted. To prevent being tossed against the ceiling, he fixed his feet in leather straps attached to the floor, and held firmly by the chair. In this determined state he made a round O of his mouth; the operator popped in the instrument, and—u-g-h! a-h!—it slipped. He felt as if a loaded wagon had passed over his head. The dentist apologized, saying "it was a common occurrence; gentlemen did not mind it much, because the next attempt was always successful." This my friend was obliged to receive as a consolation, though deficient in every satisfactory particular. Down he sat; made an-

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other round O; in went the instrument—oh!—ough!—gh! His head seemed separated from his body, but only part of the tooth with one fang was extracted. Again the dentist begged pardon; "hoped he should be excused, as every one must have a beginning, in whatever profession. He would fetch his master, who would punch out the remaining fangs in less than a quarter of an hour!" This was too much. The gentleman sickened at the idea, and left the shop in a worse state than when he entered, resolving never to intrust his head in the hands of a beginner again.

This was a frightful relation of accumulated horrors to me, for, as I had no expectation of relief from agony, but by the skill of a dentist, I shuddered lest I should be subjected to similar treatment. My poor servant girl Betty, who heard the description of this bungling operation, screamed in sympathetic recollection of what she once had suffered under the hands of a dentist. She begged of me, "for goodness sake, to give up the notion of going to have my tooth hauled out in that fashion, for she could assure me it was quite unspeakable for to tell the pain that must be endured. It was the most horrid *scraunch* that ever was in this mortal world. Nobody could tell if their head was off or no, and it wa'nt a right way for to treat any human Christian." I listened to poor Betty, because I began to think there was one person who could appreciate my sufferings. I hoped to escape from farther interruption by being denied, but Betty told me a gentleman had been waiting some time in the parlor, who said he would not detain me half a minute. He came—a friend I had not seen for years. He sympathized with me, while I briefly told how sadly I was afflicted.

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"My dear friend," exclaimed he, "I can cure you in ten minutes." "How? how?" inquired I: "do it in pity." "Instantly," said he. "Betty, have you any alum?" "Yes." "Bring it, and some common salt."

They were produced; my friend pulverized them, mixed them in equal quantities; then wet a small piece of cotton, causing the mixed powders to adhere, and placed it in my hollow tooth.

"There," said he; "if that do not cure you, I will forfeit my head. You may tell this in Gath, and publish it in the streets of Aschalon: the remedy is infallible."

It was as he predicted. On the introduction of the mixed alum and salt, I experienced a sensation of coldness, which gradually subsided, and with it the torment of the toothache.

Though I thus learned something from my sufferings, and entertain a hope that what I learned, being thus published, will be of service to my fellow creatures, I am far from believing that any catholicon or universal remedy has yet been discovered for this afflicting malady. It would almost appear, indeed, that, instead of there being any general cure for the toothache, every body would require to have his own cure; for though certain preparations have been found effectual in certain cases, nothing is so common as to find these fail when applied to others. Probably there is one particular cure for every man on earth, if he only could discover what it is. Till that be done, I am afraid that the disease must be looked upon as a *pin loose in nature*, and just endured, when a remedy cannot be hit upon, as an unavoidable evil.

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MONTREAL.

We are indebted to Bouchette's elaborate work on the British Possessions, for the view of Montreal, presented above; as also for the following facts relating to that city.

The city of Montreal stands on the south side of the island of the same name, in latitude 45° 31′ north, and longitude 73° 34′ west. The second city of the province in point of importance, it is undoubtedly the first with respect to situation, local advantages, and superiority of climate; its form is a prolonged square, that, with the suburbs, covers about one thousand and twenty acres of ground, although within the walls of the old fortifications the contents of the area did not exceed one hundred acres.

In its present state, Montreal certainly merits the appellation of a handsome city. It is divided into the upper and lower town, although the elevation of one above the other is scarcely perceptible; these are again subdivided into wards. The streets are airy, and the new ones, particularly, of a commodious width; some of them running the whole length of the town, parallel to the river, intersected by others at right angles. The houses are for the most part built of a grayish stone, many of them large, handsome, and in a modern style: sheet-iron or tin is the universal covering of the roofs.

Montreal, as it is at present, containing a population of about thirty thousand souls, rivals the capital of Canada in many respects, and as a commercial emporium certainly surpasses it: seated

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near the confluence of several large rivers with the St. Lawrence, it receives by their means the productions of the best settled and also the most distant parts of the district, those of the fertile province of Upper Canada, as well as from the United States. Possessing these combined attractions, it is by no means unreasonable to infer, that in the lapse of a few years, it will become the most flourishing and prosperous city of the British North American dominions; and Quebec, viewed as a military position, may always be looked upon as an impregnable bulwark to them. The harbor of Montreal is not very large, but always secure for shipping during the time the navigation of the river is open. Vessels drawing fifteen feet water can lie close to the shore, near the market gate, to receive or discharge their cargoes; the general depth of water is from three to four and a half fathoms, with very good anchorage every where between the Market-gate Island and the shore: in the spring this island is nearly submerged by the rising of the river; but still it is always useful in protecting ships anchored within it from the violent currents of that period, and at other times serves as a convenient spot for repairing boats, water-casks, and performing other indispensable works.

The environs of Montreal exhibit as rich, as fertile, and as finely diversified a country as can well be imagined. The space near the town, and all round the lower part of the mountain, is chiefly occupied by orchards and garden grounds; the latter producing vegetables of every description, and excellent in quality.

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ON THE HEAVENLY BODIES.

One of the greatest circumstances which fixes the attention in the contemplation of the heavenly bodies that form our system, is the surprising distances at which they are placed, and the stupendous amount of space which they occupy by their circuits. Our Earth is about 90 millions of miles from the sun; Saturn is above 800 more millions farther off; and the next and most remote that we know, which is connected with us, the Uranus, is twice that mighty distance. Mr. Hornsby has made the following calculations of the absolute distances of the planets from the sun in English miles:—

Mercury	36,281,700	Mars	142,818,000
Venus	67,795,500	Jupiter	487,472,000
Our Earth	93,726,900	Saturn	894,162,000

The Uranus is twice that of Saturn. The fact is sublime, and vast beyond the power of our words to express, or of our ideas to conceive. This last planet of our system rolls in an oval circuit, of which 1738 millions of miles is the diameter; and, therefore, goes round an area of 5000 millions of miles. Our system occupies this amazing portion of space; and yet is but one small compartment of the indescribable universe. Immense as is an area of 5000 millions of miles, yet it is but a very little part of the incomprehensible whole. Above 100,000 stars, apparently suns like ours, shine above us; and to each of these, that analogy would lead us to assign a similar space: but of such marvellous extent and being, although visibly real from the existence of the shining orbs that testify its certainty to us, the mind, with all its efforts, can form no distinct idea.

Another consideration is astounding:—when we

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gaze in a clear evening, on the bright Jupiter, we are seeing an object that is 487 millions of miles from us. But when we look at the bright Orion, or the Great Bear, we are beholding substances which are ten thousand times that remoteness from us. The idea frequently overwhelms me, as I stand and view them, and think that I, a petty human being, have the faculty, and can exercise the power, of looking through millions of millions of miles of extended space, and that I am at that moment actually doing so, and that such an amazing expanse is visible to my eye, and perceptible by my conscious, though, in comparison, insignificant soul.—*The Sacred History of the World.*

THE NEW ZEALANDERS.

In general, the New Zealanders are a tall race of men, many of the individuals belonging to the upper classes being six feet high and upwards. They are also described as strong, active, and almost uniformly well-shaped. Their hair is commonly straight, but sometimes curly: Crozet says he saw a few of them with red hair. Cook describes the females as far from attractive; but other observers give a more flattering account of them. Mr. Savage, for example, assures us that their features are regular and pleasing; and he seems to have been much struck by their "long black hair and dark penetrating eyes," as well as "their well-formed figure, the interesting cast of their countenance, and the sweet tone of their voice." Captain Cruise's testimony is almost equally favorable.

The dress of the two sexes is exactly the same, and consists of an inner mat or tunic, fastened by a

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girdle round their waists, and an upper cloak, which is made of very coarse materials for ordinary wear, but is of a much finer fabric, and often, indeed, elaborately ornamented, when intended for occasions of display. Both these articles of attire are always made of the native flax. The New Zealanders wear no covering either for the head or the feet, the feathers with which both sexes ornament the head being excepted.

The food upon which they principally live is the root of the fern-plant, which grows all over the country. This root, sometimes swallowed entirely,

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and sometimes only masticated, and the fibres rejected after the juice has been extracted, serves the New Zealanders not only for bread, but even occasionally for a meal by itself. When fish are used, they do not appear, as in many other countries, to be eaten raw, but are always cooked, either by being fixed upon a stick stuck in the ground, and so exposed to the fire, or by being folded in green leaves, and then laid between heated stones to bake. But little of any other animal food is consumed, birds being killed chiefly for their feathers, and pigs being only produced on days of special festivity. The first pigs were left in New Zealand by Captain Cook, who made many attempts to stock the country both with this and other useful animals, most of whom, however, were so much neglected that they soon disappeared.

Cook likewise introduced the potato into New Zealand; and that valuable root appears to be now pretty generally cultivated throughout the northern island. The only agricultural implements, however, which the natives possess are of the rudest description; that with which they dig their potatoes being merely a wooden pole, with a cross-bar of the same material fixed to it about three feet from the ground. Mr. Marsden saw the wives of several of the chiefs toiling hard in the fields with no better spade than this; among others the head wife of the great Shunghie, who, although quite blind, appeared to dig the ground, he says, as fast as those who had their sight, and as well, first pulling up the weeds as she went along with her hands, then setting her feet upon them that she might know where they were; and, finally, after she had broken the soil, throwing the mould over the weeds with her hands.

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NEW ZEALAND CHIEF.

It is a point of honor with a chief never to touch what belongs to those who have trusted themselves to his friendship, and against whom he has no claim for satisfaction on account of any old affront or outrage. To be supposed capable of doing so, would be felt by any of them as an intolerable imputation. We find a striking instance of this, to pass over many others that might be quoted, in the conduct of Tetoro, who returned home to New Zealand from Port Jackson, along with Captain Cruise, in the Dromedary. It was thought necessary, during the passage, to take from this chief a box containing some gunpowder, which he had got with him, and to lodge it in the magazine until the ship arrived at New Zealand. "Though every exertion," says Captain Cruise, "was used, to explain the reason why he was requested to give it up, and the strongest assurances made that it should be restored hereafter, he either could not or

would not understand what was said to him. Upon parting with the property, which, next to his musket, was in his' eyes the greatest treasure in the world, he fell into an agony of grief and despair which it was quite distressing to witness, repeatedly exclaiming, 'No good;' and, rolling himself up in his mat, he declined the conversation of every one. He remained in this state so long, that the powder was at length brought back; but he refused to take it, saying, 'that they might again put it in the magazine, since they must now be aware that he had not stolen it.'" Similar to that of Tetoro, was the conduct of a chief whom Mr. Marsden met with on his first visit to New Zealand, and who was so much grieved and ashamed at the circumstance of one of his dependants having stolen some trifle from that gentleman, that he sat for two days and nights on the deck of the ship, and could not be prevailed upon to enter the cabin. The following engraving of a view in New Zealand, is from Cook's Voyage.

REMARKABLE TRAVELS.

The accounts brought home by travellers, regarding countries rarely visited and little known, have been always received with much incredulity by those who were little acquainted with the world; and the Persian Proverb that "he who has seen the world has a right to tell lies," has been used rather too lavishly in judging of the details of travellers, that were afterwards found to be worthy of far different treatment. "We travellers," says Lady Wortley Montague, "are in very bad circumstances: If we say nothing but what has been said before us, we are dull, and we have observed nothing. If we tell any thing new, we are laughed at as fabulous and romantic, not allowing either for the difference of ranks, which affords difference of company, or more curiosity, or the change of customs, that happens every twenty years in every country. But the truth is, people judge of travellers exactly with the same candor, good-nature, and impartiality, they judge of their neighbors upon all occasions." It is this which has led many men of high honor, who would not submit to have their veracity called in question, to continue entirely silent regarding many remarkable things seen by them in strange countries, and the relation of which would most probably have been received with evident incredulity by the hearers.

A Hindoo scarcely thinks it possible that any nation can live without rice—a Greenlander thinks the same of blubber—a Persian thinks the same of the date-tree—an African of the palm-tree—a Maldivian of the cocoa-nut—and a Tartar of the horse—while the native of Terra del Fuego would be much astonished if he were told that any nation

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could live without shell-fish. It is only by attending to the accounts of respectable travellers regarding foreign countries, that the clouds of vulgar error and prejudice can be removed; and, in this way, it is now firmly believed by all sensible men that there is such a creature as a camelopard or a kanguroo in the world; and that there are some countries where oysters, and bread and milk, grow upon trees—all of which would have been set down to the credit of Aboulfouaris, and the Arabian Nights, at no very distant period. Accordingly, by way of fostering this vulgar incredulity, it is more than probable that the first accounts of the Patagonians furnished Swift with a hint for his giants in Gulliver's Travels; as the adventures of Baron de Tott, among the Turks, at a much later period, produced the memoirs of the unparalleled Baron Munchausen! Bruce's veracity regarding what he saw in Abyssinia was likewise called in question without ceremony; and it was not till a considerable time after his death, that the character of that high-minded traveller was proved to be without a flaw.

With the view of removing such prejudices as these, which are almost always based on ignorance, we shall, in this and a few succeeding articles, bring forward the accounts given by some travellers of unquestionable authority, of their observations and adventures in uncivilized countries; taking care to select such as appear to be most uncommon, and such as may afford most amusement and instruction to our youthful readers in particular.

What *Africa* was to the ancients in the way of producing novelties, *America* has been to the moderns. Utopia, New Atlantis, El Dorado, Fairy Land, and the Painters' Wives' Islands, were all

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said by the wits of the sixteenth century to be portions of this lately discovered quarter of the globe. "The Painter's Wife's Island," says Dr. Huelyn, "is an island of this tract, mentioned by Sir Walter Raleigh in his History of the World; of which he was informed by Don Pedro de Sarmiento, a Spanish gentleman employed by his king in planting some colonies on the Straits of Magellan, who, being taken prisoner by Sir Walter in his going home, was asked of him about some island which the maps presented in those straits, and might have been of great use to him in his undertaking; to which he merrily replied, that it was to be called the Painter's Wife's Island, saying, that while the painter drew that map, his wife sitting by desired him to put in one country for her, that she in her imagination might have an island of her own. His meaning was, that there was no such island as the maps presented. And I fear the painter's wife hath many islands, and some countries too, upon the continent, in our common maps, which are not really to be found on the strictest search." Of such sort, also, are what are called the Lands of Chivalry; of which the Isle of Adamants, in Sir Huon of Bordeaux; the Firm Land, in the history of Amadis de Gaul; the Hidden Island, and that of the sage Alart, in Sir Palmerin of England; as also the Island of Barataria, of which the famous Sancho Panza was some time governor, and the kingdom of Micomicona; "which, as the ingenious author of the History of Don Quixote merrily observeth," says Dr. Huelyn, "are not to be found in all the map."

In the morning, think on what you are to do in the day, and at night think on what you have done.

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EARLY BRITONS.

The winter residences of the early Britons were either natural caves, or places deeply hollowed into the earth by manual labor; some of which are still to be seen in Cornwall and the Hebrides. Their summer habitations were slight and easily removed, and their towns were only tracts of forest land surrounded by a sort of rampart of earth, with a ditch below it. Within these enclosures, their simple structures were formed of the branches of trees roughly woven, or wattled together, and daubed over with clay. In this sort of work they were doubtless well skilled: even their refined conquerors admired the British baskets, which were exported to Rome in large quantities, and were so highly prized there, that more than a hundred years after the time of which we are now speaking, a

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celebrated Roman satirical poet ranks them among the extravagant luxuries of his countrymen. Their boats, also, were formed of similar material; for, although living in an island, they had no better vessels than baskets covered with the skins of beasts; and in these frail barks they sometimes ventured to cross the Irish Channel, and to pass over to their neighbors the Gauls, who inhabited the country now named France.

The ancient Britons were almost wholly without clothing, or only partially covered with the hides of animals; like all savage nations they delighted in ornament, and they adorned even the skin of their bodies with various strange devices. This indulgence of vanity was hardly earned, and purchased by considerable personal suffering. Like the tattooing of modern uncivilized tribes, figures of animals, of plants, and of any other object which fancy dictated or fashion prescribed, were traced on the flesh by means of innumerable punctures inflicted by an instrument full of small sharp teeth; and the wounded parts being stained with the juice of a native plant called woad (still in common use with our dyers,) became, when healed, of an indelibly blue color.

The British food consisted chiefly of flesh and milk; in the southern part of the country some attempts at agriculture were perceptible, and the inhabitants exhibited some faint signs of civilization. This superiority is to be attributed to the traffic carried on with that coast by ships from various parts of the world, and to intercourse with the neighboring shores of Gaul. The wild islanders, however, were not much benefited by these visiters, who bartered articles of small utility, or of mere ornament, for their most valuable commod-

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ities; and who, while they were thus unconsciously contributing to the improvement of our countrymen, gave the most frightful accounts of their ferocity and ignorance, when they travelled to other lands, or returned to their own.

We may readily conceive that the blessings of a bounteous Providence were frequently converted into evils, by a people so uncivilized, and that the best gifts of Nature were of but doubtful advantage. The rich and prolific soil exhausted itself in wild and encumbering luxuriance; the plains were barren; the valleys impassable; the springs choked at their sources, and the rivers overflowing their banks, formed vast tracts of unprofitable and unwholesome marshes. Woods covered the face of the greater part of the country; one forest named Anderida, is stated to have been a hundred and twenty miles in length, and although the beasts of prey were limited to a single species, that species was suffered to breed and to harbor almost without molestation.

The people were as uncultivated as their country; coarse, wild, and ferocious, with all the evil passions of their nature permitted, like the wolves of their forests, to riot without curb or restriction. The absence of moral law produced its usual effects upon the human character, and the boasted liberty of the early Britons was but a license to sin with impunity. Their religious worship, far from softening or improving their minds, evinced its unholy origin, by producing effects of a directly opposite nature. The gloomy and terrific superstition taught by the Druid-priests led its votaries to temples formed of vast unhewn masses of stone, in the deep recesses of consecrated groves, or the lonely silence of wide extended plains. From the altars

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raised within these singular edifices, the steam of human offerings frequently ascended, as a grateful and pleasant sacrifice to Deities who delighted in blood; and if the Briton spared the captive taken by his hand in battle, it was only to yield him, bound and helpless, as a victim to the sacrificing knife of the Druid; or, enclosed alive in a cage of basket-work, to be slowly consumed amid the flames of the altar.

Such was merry England, "the gallant, the

courteous, and the free," when the Roman galleys were first seen approaching her shores fifty-five years before the birth of our Saviour.

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THE BANIAN TREE.

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THE BANIAN TREE (*Ficus Indica*) is one of the many species of the fig-tree, and deserves notice, not only as a fruit-tree, but from its being a sacred tree with the Hindoos in the East Indies, from the vast size that it attains, and from the singularity of its growth. The fruit does not exceed that of a hazel-nut in bigness; but the lateral branches send down shoots that take root, till, in course of time, a single tree extends itself to a considerable grove. This remarkable tree was known to the ancients. Strabo mentions, that after the branches have extended about twelve feet horizontally, they shoot down in the direction of the earth, and there root themselves; and when they have attained maturity, they propagate onward in the same manner, till the whole becomes like a tent supported by many columns. This tree is also noticed by Pliny with a minute accuracy, which has been confirmed by the observations of modern travellers; and Milton has rendered the description of the ancient naturalist almost literally, in the following beautiful passage:

> "Branching so broad along, that in the ground
> The bending twigs take root; and daughters grow
> About the mother tree; a pillared shade,
> High over-arched, with echoing walks between.
> There oft the Indian herdsman shunning heat,
> Shelters in cool; and tends his pasturing herds
> At loop-holes cut through thickest shade."

Some specimens of the Indian fig-tree are mentioned as being of immense magnitude. One near Mangee, twenty miles to the westward of Patna, in Bengal, spread over a diameter of 370 feet. The entire circumference of the shadow at noon was 1116 feet, and it required 920 feet to surround the fifty or sixty stems by which the tree was supported. Another covered an area of 1700 square

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yards; and many of almost equal dimensions are found in different parts of India and Cochin China, where the tree grows in the greatest perfection. A particular account of the banian-tree (sometimes called the pagod-tree) is given in Cordiner's "Ceylon." Mr. Southey has also described it both in the spirit of a poet and a naturalist. The cut given above, which is copied from Mr. Daniell's splendid work on "Oriental Scenery," well illustrates this description:—

"'T was a fair scene wherein they stood,
A green and sunny glade amid the wood.
And in the midst an aged Banian grew.
It was a goodly sight to see
That venerable tree,
Far o'er the lawn, irregularly spread,
Fifty straight columns propt its lofty head;
And many a long depending shoot,
Seeking to strike its root,
Straight like a plummet, grew towards the ground.
Some on the lower boughs, which crossed their way,
Fixing their bearded fibres, round and round,
With many a ring and wild contortion wound;
Some to the passing wind, at times, with sway
Of gentle motion swung;
Others of younger growth, unmoved, were hung
Like stone-drops from the cavern's fretted height.
Beneath was smooth and fair to sight,
Nor weeds nor briers deformed the natural floor;
And through the leafy cope which bowered it o'er
Came gleams of checkered light.
So like a temple did it seem, that there
A pious heart's first impulse would be prayer."*

* Curse of Kehama.

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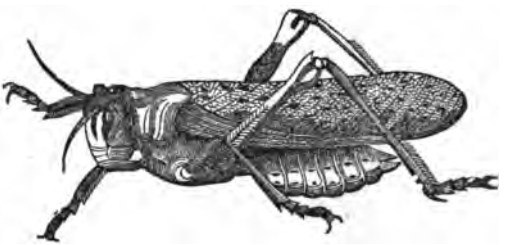
CASTANOSPERMUM AUSTRALE.

This singular fruit, which may not improperly be called the chestnut bean, was lately found by Mr. Cunningham upon the banks of the Brisbane river, in Moreton Bay, New South Wales. It is the produce of a large and handsome tree, which belongs to a new and undescribed genus, though in some particulars it seems allied to Robinia. The leaves are pinnated, upon long footstalks; the leaflets entire, and there is a terminal one. The flowers, which are papilionaceous, are produced at the bases of the leaves in considerable numbers, not unlike those of the Robinia hispida. These flowers are succeeded by pods, very large, hard, and of a brownish, or cinnamon color. These pods contain

a variable number of roundish seeds or beans, compressed on the one side, and covered with a thin loose shell of a chestnut color; when roasted, they have very much the flavor of chestnuts; and in a country where edible fruits of indigenous growth are few, they are at least a curiosity.



RAVAGES OF LOCUSTS.

The various instances of voracity among insects, sink into insignificance, when compared with the terrible devastation produced by the larvæ of the locust—the scourge of oriental countries. "A fire devoureth before them," says the prophet Joel, "and behind them a flame burneth: the land is as the garden of Eden before them, and behind them a desolate wilderness; yea, and nothing shall escape them. The sound of their wings is as the sound of chariots, of many horses running to battle; on the tops of mountains shall they leap, like the noise of a flame of fire that devoureth the stubble, as a strong people set in battle-array. Before their faces, the people shall be much pained, all faces shall gather blackness. They shall run like mighty men; they shall climb the wall like men of war; and they shall march every one in his ways, and

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they shall not break their ranks; neither shall one thrust another."—Joel ii. 2. &c.

The intelligent traveller, Dr Shaw, was an eye witness of their devastations in Barbary in 1724, where they first appeared about the end of March, their numbers increasing so much in the beginning of April as literally to darken the sun; but by the middle of May they began to disappear, retiring into the Mettijiah and other adjacent plains to deposit their eggs. "These were no sooner hatched in June," he continues, "than each of the broods collected itself into a compact body, of a furlong or more in square; and marching afterwards directly forwards toward the sea, they let nothing escape them,—they kept their ranks like men of war; climbing over, as they advanced, every tree or wall that was in their way; nay, they entered into our very houses and bed-chambers like so many thieves. The inhabitants, to stop their progress, formed trenchers all over their fields and gardens, which they filled with water. Some placed large quantities of heath, stubble, and other combustible matter, in rows, and set them on fire on the approach of the locusts; but this was all to no purpose, for the trenches were quickly filled up, and the fires put out, by immense swarms that succeeded each other."

Even England has been alarmed by the appearance of locusts, a considerable number having visited that island in 1748; but they happily perished without propagating. Other parts of Europe have not been so fortunate. In 1650 a cloud of locusts were seen to enter Russia in three different places; and they afterwards spread themselves over Poland and Lithuania in such astonishing multitudes, that the air was darkened, and the earth covered with

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their numbers. In some places they were seen lying dead, heaped upon each other to the depth of four feet; in others they covered the surface of the ground like a black cloth: the trees bent with their weight, and the damage the country sustained exceeded computation. They have frequently come also from Africa into Italy and Spain. In the year 591 an infinite army of locusts, of a size unusually large, ravaged a considerable part of Italy, and being at last cast into the sea, (as seems for the most part to be their fate,) a pestilence, it is alleged, arose from their stench, which carried off nearly a million of men and beasts. In the Venetian territory, likewise, in 1478, more than thirty thousand persons are said to have perished in a famine chiefly occasioned by the depredations of locusts.

SATURDAY EVENING.

The week is past, the Sabbath-dawn comes on.
Rest—rest in peace—thy daily toil is done;
And standing, as thou standest on the brink
Of a new scene of being, calmly think
Of what is gone, is now, and soon shall be
As one that trembles on Eternity.
For, sure as this now closing week is past,
So sure advancing Time will close my last;
Sure as to-morrow, shall the awful light
Of the eternal morning hail my sight.
Spirit of good! on this week's verge I stand,
Tracing the guiding influence of thy hand;
That hand, which leads me gently, kindly still,
Up life's dark, stony, tiresome, thorny hill;
Thou, thou, in every storm hast sheltered me
Beneath the wing of thy benignity:
A thousand graves my footsteps circumvent,
And I exist—thy mercies' monument!
A thousand writhe upon the bed of pain;

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I live—and pleasure flows through every vein.
Want o'er a thousand wretches waves her wand;
I, circled by ten thousand mercies, stand.
How can I praise thee, Father! how express
My debt of reverence and of thankfulness!
A debt that no intelligence can count,
While every moment swells the vast amount.
For the week's duties thou hast given me strength,
And brought me to its peaceful close at length;
And here, my grateful bosom fain would raise,
A fresh memorial to thy glorious praise.—*Bowring.*

CURIOUS CASE OF DECEPTION.

A very curious case of deception was communicated to me by the son of the lady principally concerned, and tends to show out of what mean materials a venerable apparition may be sometimes formed. In youth, this lady resided with her father, a man of sense and resolution. Their house was situated in the principal street of a town of some size. The back part of the house ran at right angles to an anabaptist chapel, divided from it by a small cabbage-garden. The young lady used sometimes to indulge the romantic love of solitude, by sitting in her own apartment in the evening, till twilight, and even darkness, was approaching.

One evening, while she was thus placed, she was surprised to see a gleamy figure, as of some aërial being, hovering, as it were, against the arched window in the end of the anabaptist chapel. Its head was surrounded by that halo which painters give to the catholic saints; and, while the young lady's attention was fixed on an object so extraordinary, the figure bent gracefully towards her, more than once, as if intimating a sense of her presence, and then disappeared. The seer of this striking

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vision descended to her family, so much discomposed as to call her father's attention. He obtained an account of the cause of her disturbance, and expressed his intention to watch in the apartment next night. He sat, accordingly, in his daughter's chamber, where she also attended him. Twilight came, and nothing appeared; but as the gray light faded into darkness, the same female figure was seen hovering on the window; the same shadowy form; the same pale light around the head; the same inclinations, as the evening before. "What do you think of this?" said the daughter to the astonished father. "Any thing, my dear," said the father, "rather than allow that we look upon what is supernatural."

A strict research established a natural cause for the appearance on the window. It was the custom of an old woman, to whom the garden beneath was rented, to go out at night to gather cabbages. The lantern she carried in her hand, threw up the refracted reflection of her form on the chapel window. As she stooped to gather her cabbages, the reflection appeared to bend forward; and that was the whole matter.—*Sir Walter Scott's Demonology.*

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